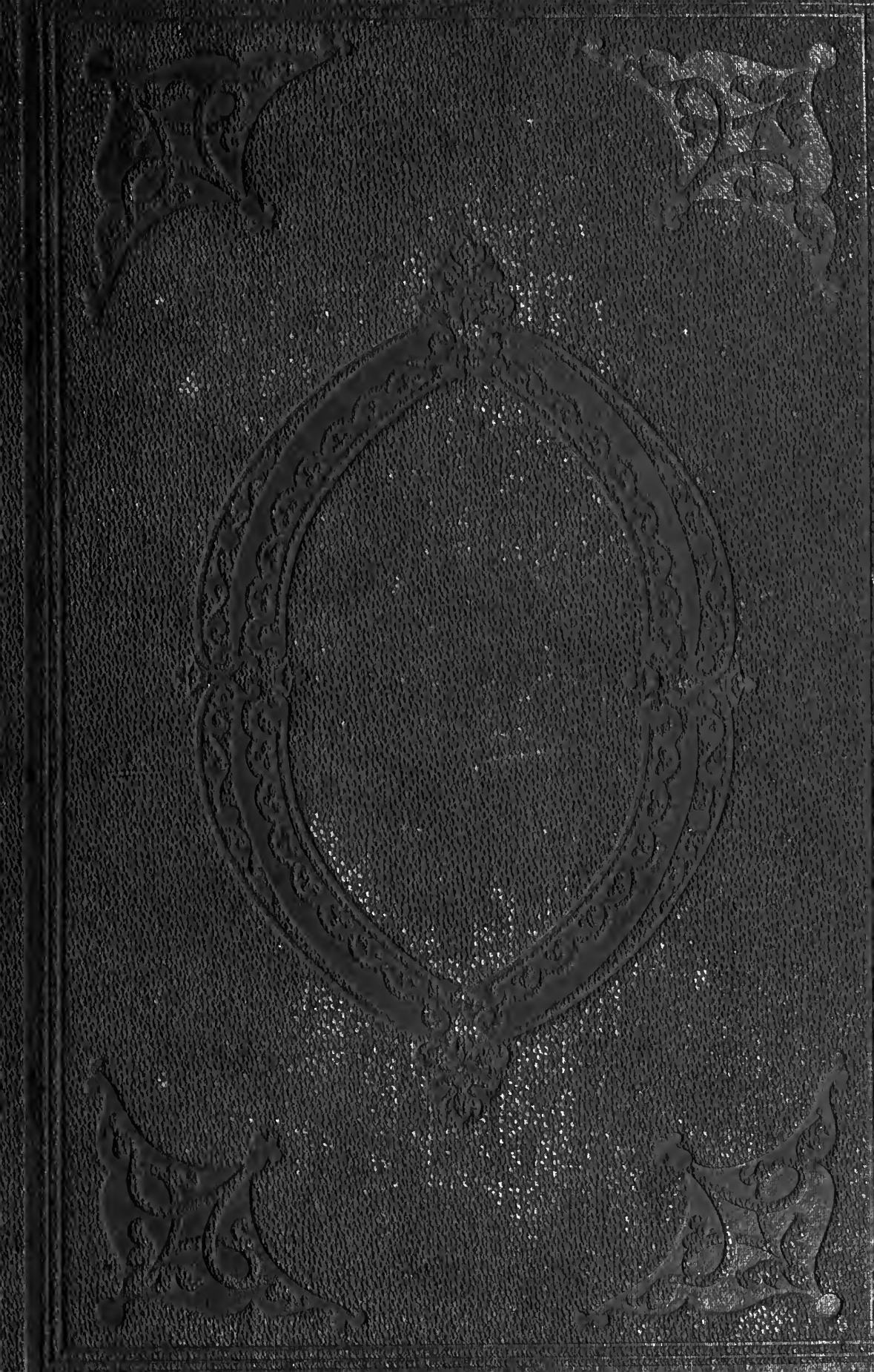

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THE

DOMESTIC CYCLOPÆDIA

OF

PRACTICAL INFORMATION

FOR

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DOMESTIC CYCLOPÆDIA.

☞ *In searching for a Recipe, or any other topic, you will be more apt to find it under the general term (or noun) than under the qualifying term. If you do not find it under one head, look for it under the other. For example: in looking for Quince Preserves, turn first to PRESERVES, not to Quince; or for Oyster Sauce, to SAUCE, not to Oyster.*

If in glancing through an article, you do not find what you want, see if there is not, at the end, a cross-reference to some kindred article.

A

ABRASION.—A rubbing off of the outer surface of the skin. Wash gently to remove foreign matter, grease with a little sweet oil or pure lard, and cover for a day with a cloth. Do not apply salt water, camphor, or any irritating remedy.

ABSCESS.—An accumulation of pus or purulent matter following inflammation of any tissue of the body. A superficial abscess is preceded by redness and swelling. Taken early it can often be dispersed. Rest the part, bathe it with warm lotions, and, if the skin be very tense, moisten it with a mixture of three parts of sweet oil and one of vinegar, or a wash of two drams of sugar of lead, one dram of powdered opium, and a pint of water, and cover with a piece of wax plaster. In great pain apply a soft poultice, renewed several times a day. When the abscess is ripe, open with a lancet. For so-called abscesses in the head, *see* EAR.

ABSINTHE.—An alcoholic tincture of the leaves of the *Absinthe*, or wormwood, the roots of lingwood and aromatic cane, aniseed, leaves of dittany, origan, fennel, mint and balm mint, and a little essence of cumin. It is used largely by the French. Taken habitually in excess, it is apt to lead to softening of the brain and general paralysis.

ACACIA.—The **Flowering Acacia.** A small tree very pretty in foliage, growing anywhere and always flowering well. When in bloom, in June, it is covered with a profusion of pea-shaped pinkish white flowers clustered on short stems.

Rose Acacia, smaller than the flowering, but more beautiful. It has clustered branches of pink pea-shaped flowers; is easily grown, and requires no attention. It should be trained to a single stem, but its tendency to throw up suckers renders it troublesome in a small garden.

ACCIDENTS.—Professor Wilder, of Cornell University, gives these short rules for action in case of accident:—

For dust in the eyes, avoid rubbing; dash cold water in them; remove cinders, etc., with the round point of a lead pencil.

Remove insects from the ear by tepid water; never put a hard instrument into the ear.

If an artery is cut, compress it above the wound; if a vein is cut, compress it below.

If choked, go upon all fours and cough.

For slight burns, dip the part in cold water; if the skin is destroyed, cover with varnish.

For apoplexy, raise the head and body; for fainting lay the person flat.

For more detailed remedies in special cases see articles on each of the above and on ABRASION, BANDAGES, BLEEDING, BRUISES, BURNS, CUTS, DISLOCATIONS, DROWNING, FRACTURES, FROST-BITE, POISONS, SCALDS, and SPRAINS.

ACCOUNT. (*See* BILL.)

ACIDS—Vegetable Acids exist in many substances used as food. *They are sour to the taste*, but may be so diluted with water that the sourness is not perceptible; but if a piece of blue *litmus paper* (to be had at the druggists,) be dropped in, its color will be changed to red. The principal domestic acids are the following:

Acetic Acid, represented by Vinegar.

Citric Acid, giving their sourness to the lemon, orange, citron and cranberry, and, mixed with malic acid, existing also in the gooseberry, red-currant, strawberry, raspberry, and cherry. It is extracted from lemon juice, and sold in the form of crystals, which can be re-dissolved in water, flavored with a little essence of lemon and so used as an artificial lemon juice.

Malic Acid, the peculiar acid of apples, but found in most American fruits, and in tomatoes.

Oxalic Acid. Poison. (*See* OXALIC ACID.)

Tannic Acid combines with iron and forms the basis of most writing inks. It is found in the bark of many trees, and in gall nuts, has a weak acid taste, and is astringent and bitter.

Tartaric Acid, found in a pure state in grapes, and some other fruits. It is a cheap substitute for citric acid, but inferior. It is one of the two ingredients composing the *Soda* or *Seidlitz Powders*.

AËRATED BREAD.—Not made in the household but at some bakeries. After the dough is mixed, tubes are introduced into it and are connected with a reservoir containing carbonic acid gas, and this is mechanically injected throughout the bread to lighten it.

The so-called aërated bread is deficient in flavor, and is less agreeable and digestible than home-made bread, or any other which has been raised with yeast in the ordinary way. (*See* BREAD.)

AGAVE.—A plant known popularly as the American aloe or "Century-plant," the latter name being given it on account of a mistaken idea that it blooms only once in a century. In this latitude it reaches maturity at a period varying from 10 to 70 years, and then blooms once; as soon as the flowers fall the plant withers and dies. The aloe is applied to many uses. *Pulque*, the well known Mexican liquor is made by fermenting the sap drawn from incisions in its stem, and from pulque is distilled a singularly fiery spirit known as *Vino Mezcal*. A coarse sort of thread known as the pita flax, is made from the fibres of its leaves; and from an extract of the leaves balls are made which lather in water like soap. It grows in moderately rich soil, and needs protection in winter.

AGUE.—Ague, or Intermittent Fever, or "chills and fever" as it is popularly called, is caused by a miasma believed to be due to decaying organic matter. It is generated most abundantly in marshy ground, and is capable of being wafted along plains to a considerable distance from its source. There are three kinds: the *Quotidian* Ague, in which the paroxysms come on every 24 hours; the *Tertian*, in which they occur once in 48 hours; and the *Quartan*, in which they occur once in every 72 hours. Each paroxysm consists of a *cold stage*, generally beginning with pain in the head and loins, weariness of the limbs, a sensation of coldness in the extremities, stretching and yawning, to which succeed shivering and violent shakings; of a *hot stage*, in which there is intense fever, the skin becomes red, and very hot to the touch—the pulse being quick, full, and hard, accompanied with great thirst; and, finally, of the *sweating stage*, in which perspiration comes on, first showing itself on the face and neck, and gradually extending over the whole body. This latter always affords relief and marks the abatement of the paroxysm.

Treatment.—Quinine is the only remedy within reach of domestic medicine, in a dose of 10 grains for an adult in the period immediately following the sweating stage of the last paroxysm. It is desirable that sufficient quinine should be given to produce ringing of the ears. If this is not effected by the first dose it should be repeated in three or four hours. When the cold stage, or chill, appears, the patient should be put in bed, and covered sufficiently with bed-clothes. If the succeeding paroxysm is not prevented, the same course should be pursued. A third administration of quinine in large doses is rarely required. It is desirable to continue with the drug in doses of two grains three times a day for some weeks after the chills are broken. The bed-clothes should be removed as reaction sets in, and cooling drinks may be given if called for by the patient. Between the paroxysms the patient must be supported with food that is nourishing, but light and easy of digestion, such as veal or chicken broth, sago, rice, gruel with a little wine in it, light puddings, etc. A glass of light wine may also be taken now and then, and negus acidulated with lemon juice. As the chief object in treating ague is to brace and strengthen the system, the patient ought to take as much exercise between the paroxysms as he can bear, and not to give up to the indolence which is one of the accompaniments of the disease. Change of air to a high and dry one is also excellent, and sometimes it is the only method of cure. In severe cases of ague, other treatment is required, but they demand the skill of an experienced physician.

AIR.—The atmosphere in which we live is so thin and invisible, and so totally unlike other objects, that we are apt to forget that it is a real substance, possessed of weight and power of resistance, and that as one of the most essential of all *foods*, it plays an important part in the economy of life. We are immersed in this thin elastic fluid as a fish is in clear water, which to him is, no doubt, equally invisible, and it presses down upon the earth with a force proportionate to its weight. Upon every square inch of the earth's surface there rests about 15 lbs of air. Upon the body of a medium-sized man, having a surface of 2000 sq. inches, the atmosphere presses with a force equal to 30,000 pounds; a force which would crush him to atoms were it not that there is air also within the system which exerts an equal outward pressure, and thus prevents injury. Air consists of two *elements*, oxygen and nitrogen, and a pair of *compounds*, Carbonic acid gas and vapor of water. Oxygen and nitrogen are by far the largest constituents, dry air containing about 77 per cent. of nitrogen and nearly 23 of oxygen; but these gases are not combined as oxygen and hydrogen combine to form water, but are simply mixed together; and although various influences tend to mix them so perfectly that the proportion in a given volume at different places is nearly the same, it is not absolutely so, and one of the gases may, with the greatest ease, be separated from the other. Such separation takes place, in fact, in breathing. We draw the air into our lungs, which divide it into its two component parts, retaining the oxygen, which then mixes with our blood and enters into our entire system, while the nitrogen passes out of the body as it entered it without undergoing any change. Oxygen is one of the prime essentials of life, alike in animals and plants, and any material reduction of the proportion which it bears to the other atmospheric gases means death to every living creature. Nitrogen, on the other hand, is a negative or inert substance, its chief use being to dilute or temper the other active ingredients to a proper degree of strength. Here, then, is the principle by which the relation of air to animal life is made plain. Pure air, in its normal condi-

tion, contains about twenty parts of oxygen, seventy-nine of nitrogen, and one of aqueous vapor, and $\frac{1}{2500}$ of carbonic acid gas; and any causes which decrease the proportion of oxygen injure by so much its health-sustaining qualities. By breathing, and the burning of fuel and lights, large quantities of oxygen are removed from the air, while at the same time carbonic acid gas in nearly equal bulk takes its place. In the case of fuel, if the combustion is perfect, the air that has been changed is carried up the chimney; but not so in respiration and illumination, the air spoiled by these processes remains in the room unless removed by special ventilating arrangements. (*See* VENTILATION and WARMING.) Air is also contaminated in a considerable degree, as has already been hinted, by the exhalations of the human being. "Streams of subtle and almost intangible putrescent matter," says Professor Youmans, "are, all through life, exhaling from each living animal body into the air. The fluid thrown from the lungs and skin is not pure water. It not only holds in solution carbonic acid, but it contains also *animal matter* the exact nature of which has not been determined." This source of contamination becomes very obvious when in the morning, from the pure outer air, we enter an unventilated bedroom, where one or two people have slept the night before. Every one must have experienced the sickening odor of such a room, and not only is the atmosphere vitiated, but two persons occupying a bed for eight hours impart to the sheets by insensible perspiration not less than a pound of watery vapor charged with latent animal poison. Gaseous exhalations of every sort also escape from the kitchen and from the cellar, if perishable substances be kept there, and are diffused through the house; from the imperfect burning of gas-jets, also, there arise emanations most injurious to health. Stoves, furnaces, and steam pipes are fruitful sources of deterioration; and the introduction of water closets into our houses, and the close connection of the sewers with our water pipes are new elements of danger. Indeed it is scarcely too strong an expression to say that every thought and act of man, every vital change in his body, and every process by which he regulates the condition of his daily life, is accompanied by the deterioration of the air upon which his health depends. The only remedy for all these evils lies in proper and adequate ventilation, in other words, in the providing of such artificial means as will insure the constant substitution of pure air for that whose oxygen has already been more or less consumed, and will prevent vitiated air from reaching the lungs. No subject in the entire range of hygiene and domestic economy is more important, and it is one which should engage the thoughtful attention of every head of a household. At this point we have only dealt with the principles of the subject; their practical application is indicated in the articles on DRAINAGE, VENTILATION, and WARMING.

ALABASTER.—A substance very similar to marble, but in its pure state more transparent. There are two kinds. One is a carbonate of lime, and therefore of the same composition as marble, but has been formed in the manner of stalactites by water dripping in a cavern; though very transparent, it is also hard, and consequently little used for sculpture. The other is a sulphate of lime, and the same substance as gypsum, from which plaster of Paris is made. Gypseous alabaster, being soft and easy to cut, and often very transparent and beautiful, is more employed in the manufacture of vases, clock-stands, statuary, and similar articles. Alabaster is apt to become yellow, especially if exposed to smoke, but may be restored by washing with soap and water (cold) and afterwards polishing with shave-grass. Grease spots may be removed by rubbing the places with powder of French chalk. As alabaster is very fragile, articles made of it, if valuable, should be kept under glass. Broken parts may be joined together again by quicklime mixed with white of egg to a paste.

ALBUMEN.—A substance, familiarly represented by the white of eggs, which exists abundantly in all animals, and in the juices, seeds, grain, and other parts of plants. It is by far the most important single element of food, since it contains nutritive matter in a compact and easily digestible form: and being almost without flavor may enter into the composition of foods very diverse in other respects, whilst it is adapted to every variety of taste. Its composition is the same in all other forms as in the blood and tissues of man and other animals; therefore it is incorporated into the system with the greatest ease, though it is necessary that it first be decomposed, so as to form new combinations. White of eggs is almost pure albumen with four-fifths of water, and for this reason, an egg is in proportion to its weight the most nutritious article of food known to man. Though albumen exists naturally as an adhesive fluid, mixed with, and soluble in, water; yet when subjected to a temperature of 142°, it experiences a striking change in its properties; as it is then converted into a solid no longer soluble in water, and if, after coagulation, it be gradually exposed to a higher temperature, it is reduced to a firm, transparent solid. Fluids, coffee in particular, are often clarified by means of albumen. When any kind of it, as white of eggs, is put into a muddy liquid, on boiling the liquid the albumen coagulates in a flaky manner, and, entangling with it the impurities, rises to the surface as scum, or sinks to the bottom, according to the weight of the fluid holding it.

ALCOHOL.—The common and active principle in spirituous liquors, obtained from sugar by fermentation. When the produce of fermentation is distilled, the spirit, being extremely volatile, rises in vapor, and in passing through a long cool tube is condensed into a liquid, which, however, is not pure alcohol, for a quantity of water and other impurities rise with it. It is necessary that it should be redistilled and pass through other processes

before it reaches that state in which it is called rectified spirit, or common *spirit of wine*, the purest form in which it is manufactured on a large scale, and the form in which it usually enters into alcoholic liquors. Few subjects have been more discussed and disputed about than whether alcohol and alcoholic beverages are entitled to rank as food or nutriment; but the best opinion seems now to be that any such claim is inadmissible. They cannot, it is said, replace water in the system, because water is the appointed solvent within the living body, and the solvent powers of alcohol are not the same as those of water; what water dissolves, alcohol may not, and *vice versa*. Alcoholic liquids coagulate and precipitate the pepsin dissolved in the watery gastric juice, and if not quickly absorbed by the stomach into the blood, they would in this way put a stop to digestion. It is argued further that alcohol contains no nitrogen, and cannot, therefore, be transformed into tissue or flesh. And the assumption that alcohol feeds respiration and supplies heat is met by the response that what heat it gives rise to, is immature and injurious, and that it acts in such a rapid way as to produce excitement and irritation in the system. It causes temporary stimulation, but this is extremely transient, and is followed by corresponding depression and retardation of the vital powers. This is a subject, however, which is dividing civilized nations into two hostile and opposing camps; and since the various beverages into which alcohol enters—ardent spirits, wines, ale, beer, and the like—are in well-nigh universal use, it is enough to add that their only distinctive feature as compared to other foods lies in the possession of this element, and that their strength is estimated by the amount of it which they contain. Alcohol is also used as an illuminator, though not in its pure state (*see* BURNING FLUID); its powerful solvent qualities make it extremely useful in medicine; and it is much used by naturalists in preserving their "specimens," since it does not dissolve either albumen or muscular fibre. Its cleansing properties, especially where grease is to be removed, are well known to housewives.

ALE.—A liquor manufactured from malt, which is usually produced from the parched grain of germinating barley by a process explained in the article on BREWING. It can, however, be made from the dried germinating grain of wheat and other cereals; any substance containing sugar being capable of yielding a wort or solution which may be fermented and converted into ale or beer. In several of the English pale ales the proportion of alcohol is as high as 10 per cent., and the average is from 5 to 7 per cent. So that a pint of good ale contains the same amount of alcohol as a bottle of claret. These ales, with those of Scotland, are largely imported, and are generally much superior to the American product. *Burton Ale*, so called from the place where it is made, is one of the strongest and very popular. It is of a somewhat thick, glutinous consistence, and sweetish to the taste; and a small quantity of it produces intoxication in those who are not accustomed to it. The best English ales are Bass and Allsopp's. *Scotch Ale*, especially the Edinburgh brands, has a pale flavor extremely vinous and very like some of the light French wines. It is mild in its effect, pale in color, and the taste of the hops does not predominate as in the *India Pale Ale* (manufactured especially for the Indian market) and Allsopp's. Scotch ales are also said to be less liable to adulteration than the English. *American Ales* are very light, rarely containing more than 3 per cent. of alcohol, and resemble what is known in England as "table beer." They are for the most part pure, however, and when fresh make a very mild and agreeable beverage. The best are made in the limestone districts of the Northwest.

ALKALIES.—A class of substances common to the mineral and vegetable kingdoms, and embracing some of our most familiar household materials, such as soda, ammonia, and potash. They are distinguished by a very nauseous taste, called *alkaline*, which cannot be described but may be understood by tasting carbonate of soda; they change vegetable blues to green, and yellow ones to brown, and they neutralize and reverse the action of acids, restoring the blue color to such vegetable solutions as have been rendered red by them. Combined with acids, they produce the substances known as *Salts*. Potash and soda are called fixed alkalies because they are not evaporated by heat; ammonia is the volatile alkali. With fats the fixed alkalies produce soaps. (*See* AMMONIA, POTASH, SODA, SOAP.)

ALLOPATHY.—A term invented by Hahnemann to designate the ordinary practice, as opposed to Homeopathy. (*See* HOMEOPATHY.)

ALLSPICE.—So called because it is thought to combine the flavor of cinnamon, nutmeg, and cloves. It is the berry of a handsome tree that grows to the height of twenty feet in the West Indies and South America. The fruit is not allowed to ripen, but is gathered while yet green; when dried in the sun it becomes black. It is less expensive than the Oriental spices, is agreeably aromatic, and is considered the most mild and harmless of the common spices; hence it is much used in cookery. The best comes from Jamaica. The *essential oil* of allspice is of a deep reddish-brown color, and extremely pungent; and a few drops is sufficient to give a flavor to gravy or to mulled-wine

ALMONDS.—There are two kinds of almonds, the sweet and the bitter, but they are considered to be only different varieties of the same species. The *Sweet Almond* is much used in dessert and confectionery. The Valentia variety is sweet, large, flat-pointed at one extremity, and compressed in the middle. The Italian almonds are less sweet and smaller. The Syrian or Jordan come from Malaga and are the best. Hard-shell almonds are generally

better than the soft-shell kinds, if for no other reason, because they are better preserved. The brown skin of the almond easily comes off by pressing with the fingers, when they are put into boiling water; they are then dried till they are brittle, and being white in the interior are said to be *blanched*. Their skin sometimes disagrees with the stomach, and for this reason almonds should be blanched when brought to the table as dessert. The bitter almond is used in flavoring many preparations. It should, however, be very carefully used, as in process of distillation it produces a violent poison.

Sauce (almond).—This is a Spanish dish. Blanch and pound sweet almonds; then add enough Bechamel sauce to make it of the consistency of thickened gravy. When mutton chops are broiled pour this sauce over them and serve at once.

Syrup (of almonds).—*See* ORGEAT.

ALPACA.—A description of cloth woven from the wool of the Alpaca, or South American sheep, extensively manufactured in England and used chiefly for clothing. It is also much used as a covering for umbrellas, being more durable and finer than cotton and less expensive than silk. English alpaca is considered the best, and comes in double and single widths.

AMARANTH.—Globe Amaranth, one of the hardy garden annuals. It requires to be brought forward in a hot-bed, but when grown makes a fine plant which blooms all summer. The soil for it should be moderately rich and moist. The flowers are purplish-red, white, or orange; and when dried form very pretty bouquets for winter. They can generally be bought in pots at the florist's.

ALTERATIVES.—This term is applied to medicines which are supposed to alter the nutrition of the body without producing any phenomena. Thus, small doses of the mercurial preparations are regarded as alterative.

AMBERGRIS.—A substance much used in the composition of perfumes. Its origin is not yet satisfactorily ascertained, but it is supposed to be a morbid secretion in the sperm-aceti whale, and is found usually on the seashore or floating on the sea. It is found occasionally in masses of fifty or one hundred ounces, but as a general thing the pieces are very much smaller. Ambergris is quite similar in appearance to amber; but it is opaque, fatty, and inflammable, remarkably light, melts readily when subjected to heat, and is scarcely soluble in alcohol. There are several varieties: gray, black, and dark-brown; the gray is the best, easiest to break, and lightest, and has the strongest odor. This odor is so powerful that if the box in which it is contained be left open for five minutes, it will perfume the whole chamber.

AMERICAN WINES.—Until a comparatively recent period American wines were seldom found upon American tables, and even now Catawba is the only one that can be said to be in general use, yet there are several varieties of both white and red wines which compare favorably with those of similar grade from any part of the world, and at the Paris Exposition of 1867 it is said by Dr. Edward Smith that none of the less expensive vintages met with greater acceptance than the sparkling wines of our Atlantic coast. It is usual in treating of the native wines to class them as wines of the Atlantic coast and wines of the Pacific coast,—or, as the latter are commonly called, California wines. The wines of the first division resemble those of Germany and France, containing more acid, more sprightliness, flavor, and bouquet; while the California wines contain but little acid, a good deal of spirits, and little flavor or bouquet, thus more nearly resembling the wines of Spain and Southern Europe. The cause of this difference is to be found partly in the soil, but chiefly in climatic influences: the heat of a southern or semi-tropical climate, like that of California, for instance, develops a large amount of sugar in the grape, and the acids are correspondingly diminished. (*See* WINE.)

Of the *White Wines*, *Catawba* is far more extensively used than any other. It varies greatly with the different locations in which the grape is grown, the wine of New York, northern Ohio, and northern Illinois containing less spirits, but a high flavor and a good deal of acid, while the wine of Missouri and further south is smoother, heavier, and less acid and astringent. It makes an excellent sparkling wine, equal to many imported, and in this form it is chiefly drunk. As a still wine it resembles the light Rhine and Moselle wines of Germany, though it has a peculiar and characteristic flavor. Next to the Catawba the most popular white wine is the *Delaware*. This wine is of a yellow color, fine flavor, and good body, closely resembling some of the finer Rhine wines; the still wine is best, the sparkling being somewhat flat and acid. Other good white wines, which we can only mention, are the *Iona*, *Isabella*, *Massasoit*, *Maxatawney*, *Herbemont*, and *Louisiana*. The two latter are produced chiefly in the Southern and Southwestern States.

Among the native *Red Wines*, *Concord* fills the same place as Catawba among the White. There is nearly as much of it made as of Catawba, and Mr. George Hussman says of it in the new edition of the *American Cyclopædia*: "it is effectually and truly the poor man's wine, as it can be produced very cheaply, and has a peculiarly enlivening and invigorating effect upon the system. For a light summer wine it has not its equal as yet, and it ought to supplant all the cheap French clarets, as it is better, more wholesome, and can be made cheaper." The wine if fermented in the barrels, varies from light red to dark red, has a strong flavor resembling strawberries, is slightly astringent, sprightly, and invigorating. If the grapes are pressed as soon as mashed, the juice makes a yellow wine, which is now coming into use as a substitute for Catawba. *Norton's Virginia* (commonly called *Virginia Port*), is generally recognized as the best medicinal wine made in America.

It is dark red, almost black, very heavy, astringent, and of a strong aromatic flavor. It is unsurpassed as a tonic; is a remedy for chronic diarrhœa, and summer complaints in children, and is said to act as a preventive of intermittent fevers and other malarious diseases. Its reputation extends to Europe, and it is generally regarded as one of the best red wines in the world. Other good red wines are those made of the *Cynthiana*, *Catawissa*, *Wilder*, and *Devereaux* grapes. The Catawissa is a claret wine of very fine flavor, and the Devereaux is an excellent dark red wine of the Burgundy class. *Scuppernong* is a wine made from a grape peculiar to the Southern States; it is pale yellow in color, and has a strong flavor and heavy body.

Of the *California Wines*, *Hock* is most consumed in the Atlantic States, where it is often sold as Rhine wine. It is a bright straw-color, of somewhat variable flavor, and though smoother, is far stronger and more apt to intoxicate than the Rhine wines, while at the same time it lacks their enlivening and exhilarating qualities. The California *Port*, made principally in Los Angeles, is dark red, strong and sweet, very probably made so by the addition of alcohol and sugar. *Angelica* is a sweet wine, a favorite among ladies; it is not a pure wine, and is stronger than is generally supposed, since alcohol, distilled from the grapes, is added to it. Madeira, Sherry, Claret, and Muscatel are all made, though in comparatively small quantity and of inferior quality. The sparkling wines of the Sonoma Valley are scarcely if at all inferior to the Catawba of the Atlantic States, or to the best imported French and German sparkling wines.

"There is one fact about California wine," says Mr. Charles Nordhoff in his work on California, "which entitles it to the preference of wine-drinkers—it is pure grape-juice. The grape grows so freely, bears so abundantly, and ripens so well, in this State, that it does not pay to adulterate the grape-juice. The wine-producer can better afford to sell the juice of his grapes than he could to manufacture any artificial compound. What may be done with the wine when it gets to the East I do not know, but here the wine-maker tells you openly this (white or red wine) is the pure juice of the grape; this (port wine) has such a quantity of brandy added to it, to make it keep, and to make it port wine; this (Angelica) has also brandy. The brandy is made in the vineyard, from the grapes which yield the wine, and is added by the vineyardist. It is no secret at all; and I am persuaded that he who wants pure grape-juice can buy it in California without the danger of being cheated by adulterations."

Of course, as in the case with foreign wines, so with American, a great deal depends upon the locality in which the grapes are grown and the attention bestowed upon the manufacture of the wine. The mere fact that a certain wine is labelled "Catawba," or "Delaware," or "Concord," is no guarantee that it will correspond with what we have said about those wines in the preceding paragraphs. It may prove serviceable, therefore, if we add that "Longworth's Catawba," the "Brotherhood Wines," and the "Sonoma," are brands which have a high and deserved reputation. The *Brotherhood Wines* include Catawba, sweet, dry, and sparkling; Delaware, sweet, and dry; Concord, and several kinds of Port, including the Virginia.

AMMONIA (Spirits of Hartshorn).—An alkali which is the result of decomposition in animal and vegetable substances. It exists almost universally in the air, and can be obtained in many ways; but the article of commerce usually comes from the distillation of coal in making gas. Ammonia has properties which are very injurious as food, but it is probably for household purposes the most useful of drugs. It is very powerful, and dissolves grease and dirt with the greatest ease. For washing paint, put a tablespoonful in a quart of moderately hot water, dip in a flannel cloth, and then wipe the woodwork; no scrubbing will be necessary. For taking grease spots from any fabric, apply ammonia nearly pure, then lay white-blotting paper over them and iron lightly. In washing lace, put about twelve drops in a pint of warm suds. To clean silver, mix two teaspoonfuls of ammonia in a quart of hot suds; put in the silverware and wash, using an old nail brush or tooth brush for the purpose. For cleaning hair brushes, etc., simply shake the brushes up and down in a mixture of one tablespoonful of ammonia to one pint of hot water; when they are cleansed, rinse them in cold water and stand them in the wind or in a hot place to dry. For washing finger-marks from looking-glasses or windows put a few drops on a moist rag and make quick work of it. House plants will flourish surprisingly if a few drops of ammonia are added to each pint of water used in watering. A teaspoonful will add much to the refreshing effect of a bath. Nothing is better than ammonia water for cleaning the hair; in every case rinse off the ammonia with clear water. For removing grease spots from clothing, a mixture of equal parts of ammonia and alcohol is better than alcohol alone; and for taking out the red stain produced by acids in blue and black cloth, nothing is so effective as ammonia.

ANÆSTHETICS.—Substances which produce insensibility on the whole or part of the human body. They are much used in surgical operations, in midwifery, and in all cases where acute pain is to be mitigated or nervous excitement reduced. It is impossible to overrate the advantages of their judicious use in such cases; countless lives have been saved by them, and their discovery has enormously diminished the sum of human suffering. The injurious effects attributed to them are so few and far between as to count as nothing in comparison with the benefits they have conferred; but their promis-

cuous use, and the administering of them by unskilled persons, are to be censured in the strongest terms. Fatal results under such circumstances are extremely likely to follow; and, in case a mistake is made, certain. (*See* CHLORAL, CHLOROFORM, ETHER, and LAUGHING GAS.)

ANCHOVY.—A little fish, resembling the sardine, prepared for sale by salting and pickling, and used not so much for food as for a relish, and for sauces and seasoning. In choosing, select those which are small, fresh pickled, white outside and red within; their back should be rounded, not flattened. To serve as a *relish*, wash, wipe dry, and remove the back bone; serve with tarragon or parsley, chopped fine, vinegar and oil. They may also be served with hard-boiled eggs, chopped or quartered.

Butter(anchovy).—Strain essence of anchovy through a fine sieve and knead it with fresh butter, or salt butter that has been previously kneaded in cold water, and it is ready for use.

Essence of Anchovy.
Paste (Anchovy).
Both of these preparations can be procured at the grocery stores.

Sauce (anchovy).—Take six anchovies, a teacupful of drawn butter, and a wineglass of pale sherry. Soak the anchovies in cold water two hours; pull them to pieces, and simmer for half an hour in just enough water to cover them; strain the liquor into the drawn butter, boil a minute, add the wine; heat gradually to a boil, and stew five minutes longer. Serve with boiled fish.

Toast (anchovy).—Slice bread the day after baking, and toast it evenly and quickly; remove the crust; spread with a little butter and then with anchovy paste; cut in triangles, or in narrow strips, and serve hot.

ANEMONE.—One of the most beautiful of our spring flowers, the common varieties growing wild in cool wood-lands and pastures. The foliage is most ornamental, and the tintings of the blossoms exquisite. The colors vary according to the situation where it blooms; in the shade, being deep, rosy or light pink-purple in its many shades; in the sun, pure white or delicately flushed with rose. The wild anemone bears a single flower, consisting of five petals; but by cultivation the stamens have been converted into petals and a double variety produced. This latter is the kind usually cultivated in gardens, and succeeds well if the exposure is not too sunny. The bulbs are tender in this latitude, and should be kept in the house until spring, in a cool, dry place, and set out as soon as the ground is well thawed. They bloom after the earlier bulbs are gone, and their flowers last a long time.

ANIMAL FOOD. (*See* FOOD.)

ANISE SEED.—A spice which comes from Egypt, and is much used for flavoring, especially in confectionery; also as a condiment. A mild decoction, made by steeping the seed in hot water, is often given to infants to relieve colic and flatulence.

ANTHRACITE.—The densest and stoniest form of coal and much the purest. Next to the diamond it approaches nearer than any other substance to pure carbon, and it emits very little smoke or gas in burning. East of the Alleghanies, it is substantially the only coal used for domestic purposes. From its great density, it is difficult to kindle, the whole mass having to be raised together to the point of ignition; but when once thoroughly fused, it burns with an intense heat for a long time, though less freely in a grate than in a furnace or close stove. Anthracite burns without flame or soot, although with sulphurous vapors which, when the draft is imperfect, are liable to accumulate in the room, to the serious detriment of the inmates. The Anthracite fire is objected to by some as producing headache and other bad symptoms; but this is usually a matter of ventilation.

ANTIDOTES. (*See* POISONS.)

ANTS.—Ants may be driven away by scalding their haunts, and putting Scotch snuff wherever they are in the habit of going for food. Set the legs of cupboards and safes in pans of water, and they cannot get at them.

APOPLEXY.—The bursting of a blood-vessel in the brain. It is accompanied with sudden loss of sense and motion, though the mechanical action of the heart and lungs still continues. A person attacked falls suddenly and lies without moving, breathing deeply, and sometimes in a peculiar manner, drawing in the cheeks and puffing them out again; the eyes are set and staring, the pupil may be enlarged, contracted, or unaffected; the face is often flushed and purplish; the pulse is full, strong, and slow and hard. If such symptoms occur in a man of mature life, the probability of its being apoplexy is very strong. In such a case a physician must be sent for immediately; and all that can prudently be done till he arrives is to loosen the collar, raise the head, and drop cold water on the face. Though the disease often proves fatal, or results in paralysis (usually upon one side of the body), yet it is not always so, and sometimes entire recovery takes place. After an attack, when paralysis has not resulted, the diet should be carefully regulated; animal food, and especially fermented liquors, should be entirely dispensed with; the bowels must be kept open by laxative medicines; gentle exercise assiduously taken; and all sudden exertions or movements carefully avoided.—The premonitory symptoms of apoplexy are giddiness, pain in the head, drowsiness, noise in the ears, loss of memory and muscular power, nightmare, and the like. When any or all of these occur, especially if the patient has had a previous attack, medical aid should be at once summoned. The above symptoms, however, while they may excite suspicion, are often experienced by persons suffering from a variety of disorders.

APPLE.—None of our fruits can be

brought to such perfection, or may be preserved with such ease through the winter. The best eating apples are the Spitzenberg, Baldwin, Winter Pippin, Red Astrakhan, Greening, Vandevere, Pound Sweet, Roxbury Russets, and Grindstones. Good cooking apples can generally be bought without specifying the kind. The hard, acid kind, are unwholesome if eaten raw; but by the process of cooking the greatest part of the acid is decomposed and converted into sugar, a process which takes place naturally in the sweet kinds, as the fruit ripens. As more than half of the substance of apples consists of water, and as the rest of the ingredients are not of the most nutritive kind, this fruit, like most fruits, is less of a nutrient than a luxury. When cooked they are slightly laxative, and therefore a useful adjunct to other food.

The best way to *keep* apples is to pluck them about a week before they are ripe, so that the ripening or *maturation* of the fruit shall take place after they are gathered. Some dry, moderately cool spot, where the frost never penetrates should be chosen, and the apples laid on shelves in such a position that they will not come in contact with each other. Choice ones may be wrapped singly in paper and put into glazed jars with covers; or packed in baskets with dry straw. The harder kinds of winter apples can be kept several months packed away in barrels and out of the frost.

Baked Apples.—Cut out blossom end of sweet apples; wash, but do not pare; pack them in a large pudding dish, pour a cupful of water in the bottom, and cover closely with another dish or pan; set in a moderately hot oven, and steam until tender all through. Pour the liquor over them while hot, and repeat as they cool. Eat with powdered sugar and cream.

Baked Sweet Apples.—The "Pound Sweeting" is best for this purpose. Sour apples may sometimes be pared and cored for baking, but sweet apples never. Put them on pie plates with a little water and bake very slowly, until they are perfectly soft.

Beurre (Apple.) (from Blot)—Peel and core the apples. Cut slices of stale bread about a quarter of an inch in thickness, and then cut them again of a round shape with a paste-cutter, and of the size of the apples. Spread some butter on each slice and place an apple upon it. Butter a bakepan, put in the apples and bread, fill the hole made in the middle of the apple by coring with sugar; place on the top of the sugar a piece of butter the size of a hazel-nut, and set in a warm, but not quick oven. When about half done fill the hole again with sugar and a piece of cinnamon, place butter on top as before, and finish the cooking. Serve warm.

Butter (Apple.)—Boil down a kettleful of cider to two-thirds the original quantity. Pare, cut and core juicy apples, and put as many into the cider as it will cover. Boil slowly, stirring often, and when the apples are tender to breaking, take them out with a perforated skimmer, draining well against the sides of the kettle. Put in another supply of apples, as many as the cider will hold, and stew them soft. Take from fire, pour entire contents of kettle into tub or large crock with first lot of apples; cover and let stand twelve hours; return to the kettle and boil down, stirring all the time, until the mass is of the consistency of soft soap, and brown in color. Spice or flavor to taste. Keep in stone jars in a cool, dry place.

Dried Apples.—Use winter apples ripe, but firm, pare, quarter and core them; divide the quarters lengthwise in two or three pieces; spread them on plates or racks and dry in a slightly heated oven. A piece of coarse muslin or net stretched over a frame and hung from the ceiling, may also be used for drying.

When the fruit is to be stewed, wash it lightly, cover with cold water, soak over night, and stew it in the same water.

Fried Apples. — Use Spitzenbergs or Greenings, quarter and core, but do not pare them; have hot drippings ready in the frying pan, and lay the apples in, the skin side down; sprinkle with brown sugar, and when nearly cooked turn and brown thoroughly.

Ice (Apple).—Boil dark green, unripe, sour apples, without peeling or coring. When soft, drain; press through a sieve, add an equal quantity of cream, make very sweet, freeze.

Syrup, Apple. (*See* SYRUP.)

Stewed Apples.—(I) Pare, quarter and core sour apples and nearly cover with cold water; cover the saucepan, and when the apples begin to boil, stir them; re-cover and boil, stirring occasionally until perfectly soft. Sweeten to the taste, and pour in an earthen dish to cool.

(II) Put a quart of hot water and three gills of crushed sugar in a milk pan; when boiling, lay in as many Spitzenbergs or Greenings—pared, quartered and cored—as the syrup will half cover; cover the pan and stew slowly until nearly done; then uncover, and as the quarters soften, place them one by one, rounded side up in the dish in which they are to be served. Reduce the syrup one-third by boiling, and just before serving pour it over the apple. This is delicious with roast turkey or fresh pork, hot or cold.

Tea (Apple).—Take two or three good pippins, slice thin, pour on a pint of boiling water, and let stand till cold. Then pour off the water, and sweeten and flavor to taste.

Water (Apple).—A pleasant and nutritious drink for the sick. Roast two or three apples thoroughly; put them into a pitcher, turn on a pint of boiling water and add a little sugar.

See COMPOTE, JAM, JELLY, PIES, PRESERVES, and PUDDINGS.

APRICOT.—A fruit native to Asia and Africa, where it forms an important item of food. Its cultivation in this country is confined mostly to the Southern States, though the fruit is found in the Northern markets. The young fruit makes an excellent jam.

Ice (Apricot).—Take very ripe apricots; pulp them through a sieve, and proceed as with apple ice, described above.

Jam (Apricot).—Wash the fruit thoroughly, and then heat it slowly and moderately, after which stew it until it is perfectly tender; then rub this stewed fruit through a colander. Allow to every pound of the fruit a pound of granulated sugar; stir the sugar in thoroughly and boil the whole gently until it is very clear. Put it up in tumblers, with the tops covered with white paper, and use as a preserve or jelly.

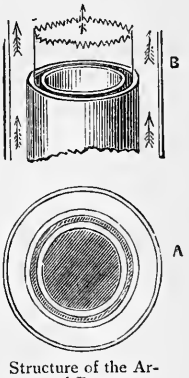
Jelly (Apricot).—Take two quarts of apricots, take out stones, cut in small pieces, and lay them in a stew-pan with a clove, well pounded, and the juice of half a lemon; cover with water, set on a moderate fire, and boil slowly till well cooked. Turn into a thick towel, under which place a vessel to receive the juice, and when it is all squeezed out, put it in a stew-pan with three-quarters of a pound of sugar to every pound of juice; boil to a jelly. This can be kept a long time by putting in pots or jars, covered with a piece of white paper dipped in brandy, and set in a cool closet.

ARBUTUS (Trailing).—A small trailing plant, sometimes called Mayflower from the season of its blossoming, and also known as the Ground-Laurel. The leaves and stems are covered with reddish, bristling hairs; and it bears a cluster of very fragrant white or pink flowers. It grows wild throughout New England, and reaches special perfection in the valley of the Connecticut; but is seldom successful in garden culture, for want probably of proper attention. In England it is found in all the nurserymen's catalogues; a fine variety has been originated called *E. rabuncula*, the flowers of which are a rich pink and larger than the common species.

ARGAND LAMP.—Called from M. Argand, a native of Geneva, who invented it in 1780. Reflecting on the cause of the smoke and disagreeable smell arising from the burning of the common oil-lamp, Argand correctly supposed that this was the result of imperfect combustion, and that this in turn arose from want of the access of sufficient oxygen. He therefore conceived the idea of admitting air into the centre of the flame, and for this purpose contrived a wick in the form of a hollow cylinder, through which a current of air passes up to the inside of the flame. This was found to succeed perfectly; the combustion was more complete, the smoke was greatly diminished, and the brilliancy of the light increased. But to improve the effect still further, he added a glass chimney, open at bottom and surrounding the flame at a short distance, by which another current of air was made to pass up outside of the burning wick. Thus every part of the thin circular flame is between two currents of air, which supply enough oxygen to create a heat sufficient to consume the smoke and convert it into light.

Argand Lamp for Kerosene Oil.

In the cut, the dark circle in the centre of A, the place of the burner, represents the interior of the hollow cylinder through which the air ascends; the thin dark line outside being the wick, and the double external line being the glass. B represents a sectional view of the burner with the wick; and the arrows show the direction of the current of air between the wick and the glass. The other great advantage of the Argand lamp is that while in the common lamp the wick is fed by capillary attraction (or suction), in it the reservoir of oil is placed above the level of the flame, thus insuring a steady and uniform light while the supply of oil lasts. A few improvements have since been made upon the original plan of construction; but the principle remains the same. and has been introduced in some form into all the improved lamps. The Argand is so manifest an improvement upon the common style of lamps that it should supersede them entirely in household use. It not only gives a far better light, but it entirely does away with the disagreeable smell and impure air which result from the imperfect combustion of the oil; and it is also much easier to keep clean and in order. Never cut the wick, but simply scrape it with the edge of a piece of card-board or stiff paper.



Structure of the Argand Burner.

Argand Burner.—The principle of the Argand lamp has been applied to the construction of a "burner" for gas. It has all the advantages over the ordinary gas-jets which the lamp has over the common lamp, and should be used whenever gaslight is made use of for work or study.

ARNICA.—A perennial herbaceous plant, growing wild in the western States and throughout the cooler parts of Europe. The flowers, and in fact the whole plant, have a pungent, disagreeable odor, and an acrid, bitter taste. *Tincture of arnica*, is a preparation of the flowers in alcohol. It is much used as a lotion, made by macerating the leaves and steeping, for sprains and bruises, for which it is an excellent remedy. Apply with a sponge or piece of old cloth. It is also given sometimes for low fevers and nervous diseases. Taken internally, it produces rapidity of the pulse, headache, dizziness, spasms of the muscles, and occasionally vomiting and diarrhœa.

ARRACK.—An East Indian name for all kinds of ardent spirits, though it is usually ap-

plied to a very strong drink fermented from rice. In the arrack made in Batavia, molasses and toddy are mixed with the rice before it is fermented; after fermentation the liquor is distilled, and the spirit thus produced is the best arrack of commerce. Other varieties come from Madras, Ceylon, and Goa. Arrack is very powerful, and in this country is never drunk in its raw state, but is used in punch; also for medicine and culinary purposes. In the latter case it is flavored with anise seed and other aromatic herbs.

ARROWROOT.—A well-known food, made from various tubers, but chiefly from the roots of the palm which grows plentifully in the Bermudas, West and East Indies, and other parts of the world. The roots are dug up when they are about a year old, and, after being washed, are beaten to a pulp, which is soaked in water till the starch has had time to settle, when the water is drained off. The white sediment of the starch is again washed with water, and, after being dried by the heat of the sun, forms the pure arrowroot. Much of the arrowroot sold in this country is made from potatoes; and it may also be made from wheat, rice, or maize by the process described above. On many farms in which arrowroot is bought it might easily be made out of surplus grain. The best comes from Bermuda, but is liable to adulteration with less costly preparations of starch. In purchasing arrowroot it should be observed that when very smooth and floury it may be suspected of containing some portion of the starch of wheat or potatoes, of inferior nutritive value, though not necessarily injurious. A teaspoonful of genuine arrowroot will thicken a teacupful of hot water or milk; while double the quantity of potato starch will be required to jelly the same quantity of liquid; and this is a good test. The nutritive value of arrowroot is small, since it consists almost exclusively of starch; but it is very useful in the sick-room. The stomach will tolerate it which rejects nearly everything else. (*See* PUDDINGS.)

Custard (Arrowroot)—A grateful dish for invalids. Take two tablespoonfuls of best Bermuda arrow-root, one quart of milk, and a pinch of salt. Scald the milk, sweeten it to taste, and then stir in the arrowroot, which must first be moistened with some of the milk. Let it boil up once. Flavor with lemon-peel, orange water, or rose water. Pour it into cups to cool.

Gruel (Arrowroot.)—Make a thin paste of the arrowroot with warm water, and pour into boiling water, flavoring it with sugar, salt, and nutmeg. A little lemon juice may also be added.

Infants (Arrowroot for).—Take a cupful of boiling water, one of fresh milk with two teaspoonfuls of white sugar dissolved in it, two teaspoonfuls of arrowroot wet with cold water, and a pinch of salt. Stir the arrowroot paste into the salted boiling water; stir and boil five minutes or until it is clear; add the sweetened milk, and boil slowly ten minutes, stirring all the time. If the child has fever or cannot digest the milk, substitute hot water for it.

ARSENIC.—POISON.—It is a white, slightly sweetish, insoluble powder.—*Symptoms.*—Burning pain, tenderness, vomiting, and cramps in the stomach.

Treatment.—Vomiting, if not present, to be induced by draughts of hot water, tickling the throat with a feather, or by giving ten grains of sulphate of zinc, dissolved in a little water. Demulcent drinks, such as milk, the white of eggs stirred in equal parts of water, or flour and water, may be given freely to envelop the poison, and encourage vomiting.

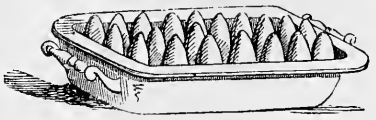
Antidotes.—Hydrated oxide of iron, a tablespoonful for an adult—teaspoonful for a child—repeated every five minutes until symptoms are relieved. Iron rust may be used, but is inferior to the above. Good results have been obtained by swallowing about a pound of castor oil and chalk, rubbed up to the consistence of cream. Should the patient survive, a long-continued bland diet will be necessary.

ARTICHOKE.—A garden vegetable resembling the thistle, a delicious and nutritious food. Plant the tuber in a well-prepared, rocky soil, about five feet apart, or plant several together in hills, at least six feet apart. They come to maturity the second year, and yield very abundantly. The part eaten is the flower head in an immature state; what is called the *artichoke bottom* is the fleshy receptacle which is surrounded by the bristles and seed-down, vulgarly called the *choke*. *To cook.* Clean them and take off the outer leaves, drop them into boiling water, with parsley, salt and pepper. They are cooked in about an hour, or when the leaves come off easily; then take them from the fire and drain, taking care to put them upside down. After being thus cooked, they may also be fried or stewed.

Jerusalem Artichoke—This plant is in no way allied to the artichoke, but is of the same genus as the sunflower and greatly resembles it. The term Jerusalem is probably a corruption of *girasole*, the Italian name for sunflower; and it is called artichoke from some imagined agreement of its taste with that of the artichoke. The root, which is the part that is eaten, consists of a cluster of tubers, in shape somewhat like the potato; and there are often thirty or forty together. It is extremely prolific, grows in almost any soil, requires no attention, and produces, under favorable conditions, as much as 2000 bushels per acre. They are wholesome and of agreeable taste, nutritious when they do not disagree, and, though not often seen on the table now, were once greatly preferred to the potato. In cooking, prepare and serve them exactly like the potato. The large amount of farinaceous matter which they contain renders them a good and cheap food for horses, hogs, and cattle. And, lastly, they make an excellent pickle. They are good too, raw, sliced with a plain dressing of vinegar, oil, salt and pepper.

A la Reine.—Wash and wipe the artichokes, cut off one end of each quite flat, and trim the other into a point; boil them in milk and water,

lift them the instant they are done, place them upright in the dish in which they are to be served, and cover them with nearly half a pint of cream thickened with a dessertspoonful of flour, mixed with an ounce and a half of



Artichoke a la Reine.

butter, and seasoned with a little mace and some salt. When cream cannot be procured, use new milk, and increase the proportion of flour and butter.

ASHES.—The solid refuse which remains after the burning of wood, coal, or other combustible materials. They are strongly alkaline, and those especially which come from wood can be put to many uses. Mixed with lime and sand (one part ashes, one of lime, and the other sand) they increase the strength of building-mortar, and prevent its cracking. Wood ashes also supply a valuable manure. The principal use to which they are put, however, is in the making of soaps. Water soaked through them gradually becomes a strong lye; and this boiled down with oil, or grease of any kind, makes a good soap. It is from ashes, too, that the potash of commerce is derived. (*See* LYE.)

ASPARAGUS.—Though not very nutritious, asparagus is easily digested. In raising, the seed should be planted in dry and extremely rich soil, the quality of which must be kept up by powerful manures. Plant in the spring, in rows about a foot apart and six inches from each other in the row, and leave untouched except by thorough weeding during the first two years. Half the shoots may be cut in the third year, and should be cut an inch or two below the surface, and after that the full crop, as long as the bed lasts, which will be, under proper management, from ten to fifteen years. Every year in the autumn, the beds should be replenished with manure, dug in between the rows as deep as possible without injuring the roots; and as a protection from frost, they should be covered in the winter with pulverized manure, straw, or barn-yard litter.

The part of the plant which is eaten is the young shoot, when from four to six inches high. It makes excellent soup (*see* SOUPS), but is generally eaten boiled.

Ambushed Asparagus.—Cut off the tender tops of fifty heads of asparagus; boil and drain them. Have ready as many stale biscuits or rolls as there are persons to be served, from which you have cut a neat top slice and scooped out the inside. Set them in the oven to crisp, laying the tops beside them, that all may dry together. Meanwhile put into a saucepan a sugarless custard made as follows—a pint, or less, of milk, and four well-whipped eggs; boil the milk first, then beat in the eggs; set over the fire and stir until it thickens, when add a tablespoonful of butter, and season with salt and pepper. Into this custard put the asparagus, minced fine. Do not let it boil, but remove from the fire as soon as the asparagus is fairly in. Fill the rolls with the mixture, put on the tops, fitting them carefully; set in the oven three minutes, after which arrange on a dish. To be eaten hot.

Boiled Asparagus.—Wash and tie evenly in small bundles: drop in boiling water slightly salted, and boil twenty minutes; take up with a skimmer and place on buttered toast which has first been quickly dipped in the hot asparagus water. Pour over it a little melted butter, with pepper and salt, or some drawn butter. Boiled asparagus when cold makes a good salad, with a plain or mayonnaise dressing.

Eggs and Asparagus.–Cut *tender* asparagus into pieces half an inch long, and boil twenty minutes, then drain till dry and put into a saucepan containing a cupful of rich drawn butter; heat together to a boil, season with pepper and salt, and pour into a buttered dish. Break half a dozen eggs over the surface, put a bit of butter upon each, sprinkle with salt and pepper, and put in the oven until the eggs are set.

Fried Asparagus.—Blanch the asparagus a couple of minutes, and then drain it; dip each piece in batter and fry it in hot fat. When done, sprinkle with salt, and serve hot. This is nice and easy to prepare.

Stewed Asparagus.—Professor Blot recommends this: Select young and tender shoots, cut them in pieces about half an inch long, and blanch for three minutes. Take off and drain; and then put them in a saucepan on the fire with two or three tablespoonfuls of broth; stir now and then for a couple of minutes, add a teaspoonful of flour; stir again, and as soon as the whole is thoroughly mixed, add an ounce of butter, salt, pepper, and chopped parsley. When the butter is melted, serve.

ASPHALTUM.—A bituminous substance, of about the consistency of resin, and sometimes called mineral pitch. It exists in a natural state in many parts of the world, and in France in sufficient quantities to be used extensively in building. Artificial asphaltum, chiefly used in the United States, is made generally from the refuse tar of the gas-house mixed with slaked lime and gravel, in the proportions of 25 parts of tar, 50 parts of slaked lime in fine powder, and 75 parts of gravel. These must be thoroughly incorporated by boiling. It makes excellent sidewalks, floors for stables, cattle-stalls, heneries, water-tight tanks, roofs, and the like, being not only cheap and easy of preparation but impervious to vermin; and gas-pipes covered with it are protected from corrosion.

ASPHODEL.—A hardy perennial garden plant, easy of culture, and of very rapid increase. It may be raised from seed or by propagation, by planting in the spring in a rich damp soil; it grows about three feet high, dies down every winter, and sprouts up again in the spring. The flowers of one species of asphodel,

the *King's spear*, are yellow, and grow numerously on a long spike, reaching nearly to the ground. There is another variety called white or blanched asphodel, which is very pretty. The plant of this latter is smaller than that of the yellow, which is the common variety. Both bloom about midsummer, and last six weeks.—Asphodel was planted in the neighborhood of sepulchres by the ancients, who had a superstition that the manes of the dead drew nourishment from its roots.

ASTER.—A perennial plant very popular for garden culture, and offering an extraordinary variety. Full two hundred species are known to florists, and these include every variety of colors and shades. In culture, the seed should be sown in a hot-bed about the middle of April, and transplanted to the garden about a month later. They require a dry, rich soil, and moderate exposure to the sun; and a very pretty effect is produced by planting in suitable beds, setting the plants one foot apart each way. The best varieties are *Chinensis, Dwarf, Chrysanthemum, German, Hedgehog, Paluy, Flowered, Pyramidal,* and *Ranunculus;* but choice is practically unlimited. The Chinese, who have given great attention to the culture of asters, raise them exclusively in pots.

ASTHMA.—A spasmodic disease of the lungs characterized by quick, laborious breathing, which is generally performed with a peculiar kind of wheezing noise. Sometimes the difficulty of breathing is so great that the patient is obliged to keep in an erect posture, otherwise he is in danger of suffocation. A horizontal position is always aggravating to it, and for this reason more distress is usually felt at night by the asthmatic patient than at any other time. A paroxysm of asthma usually happens after exposure to the damp, violent emotional excitement, unusual exercise of any kind, or the taking of some food which the stomach cannot digest. Persons in the decline of life are more liable to asthma than the young. It seldom admits of cure, and on the other hand it rarely shortens life, except when proper precautions are neglected in case of paroxysms.

Treatment.—The treatment of paroxysms consists in administering narcotics and antispasmodics, if possible as soon as the first symptoms are felt. Ether, chloral and laudanum in small doses are the best; and strong coffee sometimes does good. Stramonium leaves, smoked as tobacco when a paroxysm is threatened, has an excellent effect in some cases, but should be used with caution when there is disease of the heart. In chronic asthma, associated with Bronchitis such things as promote expectoration should be used: as the syrup of squills, or gum-ammoniac. A teaspoonful of the squills may be taken three times a day, and a couple of pills made of 2 grains each of assafœtida and gum-ammoniac at bedtime. Regular exercise, easy habits, and a light and uniform diet will be found very effective in ameliorating the acuteness of the disease.

ASTRAL OIL.—A refined and purified form of the kerosene oil. It is nearly odorless, burns more steadily, and has the great advantage over the common oil that it is entirely safe under all the usual conditions of domestic use. The frightful danger to which common kerosene subjects all who use it, should banish it from the household; and we know of no substitute which fulfils all the conditions of safety and economy so well as the "astral oil."

ASTRINGENTS.—Those medicines which produce contractions of the fibres with which they come in contact. When given internally they contract the walls of the blood-vessels, and thus are useful in passive hemorrhages. When employed locally, the contraction they produce makes them useful in restraining discharges of blood and mucus.

(a) Diluted sulphuric acid, 20 minims; compound tincture of cardamom, 40 minims; infusion of roses, 1 ounce. Mix, and give twice a day for discharges of blood or mucus.

(b) Decoction of logwood, 1 ½ ounces; compound tincture of camphor, 30 to 60 drops. Mix, and give after each loose motion, in diarrhœa with copious watery discharges.

(c) Tincture of matico, 30 to 40 minims; chalk mixture, 1 ounce. Mix, and give as directed at (b).

(d) Gallic acid, 40 grains; tincture cinnamon, 1 ounce; syrup simple, 3 ounces. Tablespoonful every 3 hours for passive uterine hemorrhage.

AVIARY. (*See* BIRD CAGE.)

AZALEA.—One of the most beautiful of our native shrubs. It is hardy, and in some of its numerous species is found everywhere from Maine to the Gulf of Mexico. The bush grows from four to ten feet high, is beautifully proportioned and leaved, and bears profuse umbelled clusters of white, orange, purple, or variegated flowers, some of which are unsurpassed by any other of our plants. In cultivation the azalea loves shady spots, and a sandy, loamy soil. The two best varieties are *Nudi-flora* and *Viscosa*, the former bearing pink flowers and blooming in May; the latter with white flowers and blooming in July. The best for in-door culture are, *Charles Quint, Fielden, Minerva, Punctata,* and *Narcissiflora.* Plant these latter in pots in the spring, in rich loamy soil, and water them plentifully but not too often. Florists always have them.

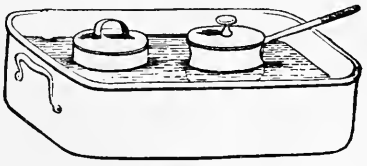
B.

BABY. (*See* INFANT.)

BACON.—That part of the hog which includes the thin portions of the ribs and belly. This is preserved in several ways, generally by rubbing in salt and saltpetre and drying, and also quite frequently by smoking. In curing, rub a mixture of four pounds of salt and half a pound of saltpetre into every part of the pork and repeat the process at regular intervals for about three weeks, during which time the flesh should be kept in a cool place. Afterwards remove and dry. In England, the preparation of bacon is different. There, instead of the hair being scalded off the hog as with us, it is singed or burned off with straw and then rubbed smooth with cold water and dressed. When cooled through, the parts designed for bacon have the spare ribs and other bones taken out, and are then covered with fine salt mixed with saltpetre, four pounds to half a pound; a pound of brown sugar is added to give flavor. The flitches, as the several parts are now called, are laid upon one another and resalted with the mixture daily for about three weeks, the top piece being transferred to the bottom each time. They are then hung up to dry or slightly smoked, after which they are ready for use. Bacon has been called "the poor man's food," and in those portions of the country where fresh meat cannot be procured regularly it forms one of the staple articles of diet; but when it has been properly cured and properly prepared for the table, it forms a dish worthy of the daintiest taste. Good bacon has a peculiarly rich and appetizing flavor, and when eaten with a due proportion of fresh vegetables, is one of the most wholesome and digestible of foods. In choosing bacon select that which has a thin rind, with firm fat which should be tinged red by the curing; the flesh should be of a clean red, without intermixture of yellow, and adhering firmly to the bone.

To Cook.—Bacon is generally fried or boiled. There is a kind called *breakfast bacon* which, when cut into thin slices and fried, either by itself or with liver, is very palatable; in the country it is generally boiled in "chunks" with some vegetable or vegetables. When bacon is found to be very salt, it should be soaked in cold water before cooking.

BAIN-MARIE, or **Water Bath.**—A large vessel containing hot water, much used in English and French kitchens for warming food or for keeping it warm when cooked. It has the great advantage over the oven or open fire that its heat is nearly uniform and is not drying. The pot or kettle or sauce-pan containing the food should be set in the bain-marie, and as the fire is only in contact with the latter vessel, the inner one can never be heated to a temperature higher than 212° Fahr., and the



Bain-Marie.

amount of heat can be regulated very easily by pouring in cold water or increasing the fire. The water-bath can be bought at most house-furnishing shops, or in its absence a large sauce-pan may be made to serve the purpose.

BAIZE.—A coarse, open, woollen cloth, woven like flannel, sometimes with a long nap on one side and sometimes without, according to the uses to which it is intended to be put. It is warm and soft, and is generally used for lining clothes and for table-covers and the like. It is usually dyed green.

BAKING.—The process of cooking in a close heated oven. The difference between baking and roasting is simply that in the one case the air within the oven is confined and unchanged while in the other it is carried off by a current and constantly replaced by fresh; but this is a very important difference and affects both the quantity and flavor of the articles cooked. Baking, as applied to meats, is an economical method of cooking, but it parches and hardens the outside and leaves a flavor which a delicate palate can always detect. Nearly all so-called "roast" meats, however, are simply baked, and it is a process not likely to be given up in our kitchens. The reader is earnestly recommended to read the article on ROASTING. Meats and fish are much improved in the baking when covered with a piece of buttered paper. In baking bread and pastry the foregoing objections do not apply of course; but it is a process whose success demands close attention. More food is "spoiled in the bake" probably than by all the other methods of cooking combined; yet intelligence and careful attention make it one of the most certain processes of the kitchen. One of the best modes of baking with which we are acquainted, is by means of a jar, resembling in form that shown above, well pasted down, and covered with a fold of thick paper, and then placed in a gentle oven. It should be borne

Nottingham Jar.

in mind that each oven has a temperature of its own, and that some dishes require more heat than others. Watch the object in process of baking from time to time, especially at the beginning, so as to turn it round if one side is cooking faster than the other, and also to regulate the temperature if necessary. Special directions will be given in the case of each article of food.

BAKING POWDERS.—These consist of carbonate of soda and tartaric acid, which evolve the necessary gas, when in contact with water, to make the bread light, leaving behind a residue of tartrate of soda. Many different kinds of baking powders are sold by grocers under various names, and the inconvenience of keeping a supply of yeast always at hand has brought them into general use. Even when pure it is doubtful if they should be used for making all the bread of a family; but unfortunately many of the manufactured powders contain alum in considerable quantities. The safest plan, therefore, is to make them at home.

Take twenty teaspoonfuls of cream-tartar and ten of carbonate of soda; roll smooth and mix well together. Keep in a jar or bottle tightly corked, and use three teaspoonfuls to a quart of flour.

BALM.—An herb, the leaves of which are usually brought in a dried state from the south of France and from Italy. In its matured state it has a mild aromatic smell, and an infusion of it makes a very useful drink in fevers.

BALSAM.—One of the hardy annuals most often found in gardens, where it is popularly called "Lady's slipper." The seed should be sown in April in a hot-bed, or in the house, and transplanted to the garden in May. They will grow vigorously in any moderately rich soil, and when once started, will spring up fresh each year in great numbers. The plant is from one to two feet high, and the different varieties have white, red, pink, flesh-color, red and purple, and variegated flowers,—blooming from June to October. There are also single and double varieties, the double being most effective. Plant the slips at least two feet apart.

BALSAMS.—A class of substances much used in medicine, but also entering into the composition of varnishes, etc. They are both solid and fluid; and consist of resin of some kind, volatile oil, and cinnamic acid, without the last of which they are not balsams. The balsam of Peru, benzoin, and the balsam of Tolu are genuine balsams; the once famous *Copaiba balsam* is not a balsam at all. Peruvian balsam is largely used as a stimulant application to sluggish ulcers. The compound tincture of benzoin is likewise used for the same purpose. The syrup of Tolu is an agreeable mixture much used in formulæ for cough mixtures. The following preparation is strongly recommended for recent wounds and bruises: Take of powdered benzoin three ounces; balsam of Peru, two ounces; hepatic aloes, powdered, half an ounce; rectified spirits of wine, one quart. Digest them in a gentle heat for three days and then strain and bottle. This preparation is also administered internally to relieve coughs, asthma, and other complaints of the breast. The dose is from 20 to 60 drops, three times a day.

BANANA.—A variety of the plantain, found in the West Indies and South America, and throughout the tropical regions of both hemispheres. In the countries where it grows it is almost always the staple food, occupying the same place there as the cereals with us. No other product of the vegetable kingdom affords so much nutriment from a given space of ground as the banana, and no other food is so peculiarly adapted to support life in the tropics. It is estimated that a quarter of an acre planted in bananas will produce enough for a family of five the year round. It grows in thick clusters of 150 to 200 to the cluster. It is eaten raw, either alone or cut in slices with sugar and cream, or wine and orange juice. It is also roasted, fried or boiled, and is made into fritters, preserves, and marmalades. It is dried in the sun and preserved as figs; meal is extracted from it by pounding and made into something resembling bread; and the fermented juice affords an excellent wine. With us it is brought to the table as dessert, and proves universally acceptable. The best kind, when they can be procured fresh, are the "lady-fingers" as they are called. They are found in our markets from March to October.

BANDAGES.—Strips of linen, muslin, or flannel, of various widths and of any length, much used in medicine and surgery. The best material for bandages is stout, unbleached muslin; but a strip of sheeting, or strip of an old petticoat or dress, will usually answer every purpose. As the *manner* in which the bandage is bound round the limb makes all the difference in the comfort of the patient, the following directions in relation to the use and application of bandages taken from Druitt's "*System of Modern Surgery*," a standard authority with physicians and surgeons, may be of service.

"I. Bandages usually consist of strips of linen, calico or flannel, varying in breadth from one to three, five or more inches, and in length from one to six, eight or twelve yards. Sometimes they are made of India-rubber web, or of a substance like stockings; but for most purposes, stout unbleached calico, or thin fine calico, will answer. They are generally rolled up longitudinally for use, and hence have received the name of *rollers*. Bandages may often be made of handkerchiefs, or square pieces of linen.

"II. The chief uses of bandages are, 1st, to keep on dressings, to protect a diseased part from injury, and put some little restraint upon its motions; 2dly, to afford a support to relaxed muscles, ligaments, and vessels. Deprive any part of its normal support, and varicose veins and dropsical effusions are sure to occur; and conversely many chronic swellings of

the limbs and joints may often be cured by the proper applications of bandages alone.

"III. **The Roller.**—In applying this to any limb, it should be held as represented in Fig. 2, and should be passed from one hand to the other as the limb is encircled with it. Begining at the extremity of the limb, it should be applied most tightly there

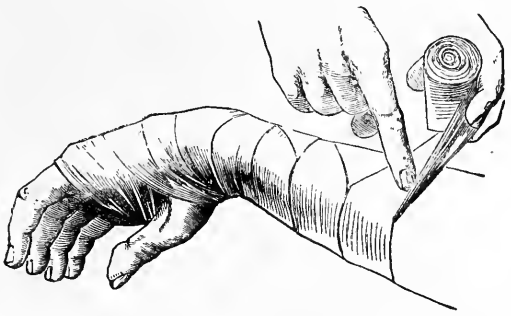


Fig. 3.

and a very little more loosely as it ascends. Very little of it should be unfolded at a time and each fold should overlap about a third of the previous one. When the limb

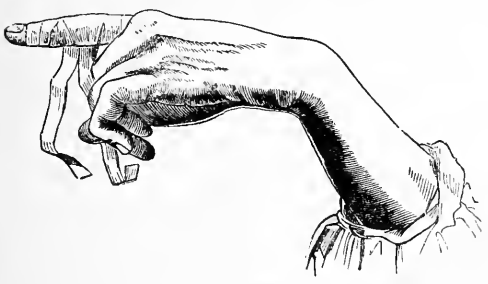


Fig. 1.

increases in size the bandage must turn on itself after the manner depicted in Figs. 3 and 5.

"IV. **Bandage for the Finger.**—This is a simple strip of linen that may be wound round the finger a few times with the requisite tightness. It must be fastened neatly without pins or stitches, as shown in Fig. 1, by merely splitting up the end of the bandage into two tails which may be turned opposite ways round the finger and be tied in a bow.

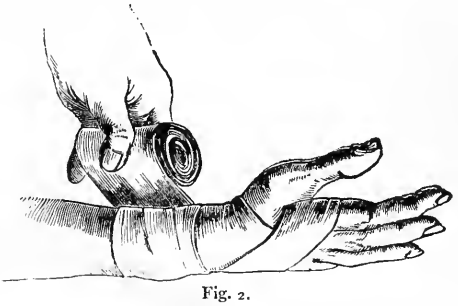


Fig. 2.

"V. **For the Hand.**—A bandage about two inches wide may be passed like a figure of eight round the hand and wrist, excluding the thumb, Fig. 2, and may be finished by one or two circular turns around the wrist.

"VI. **For the Forearm.**—After applying it about the hand and wrist as just described, carry it up the forearm, and in every turn fold the bandage sharply and smoothly back upon itself, in such a way that it may lie smoothly on the limb. (Fig. 3.)

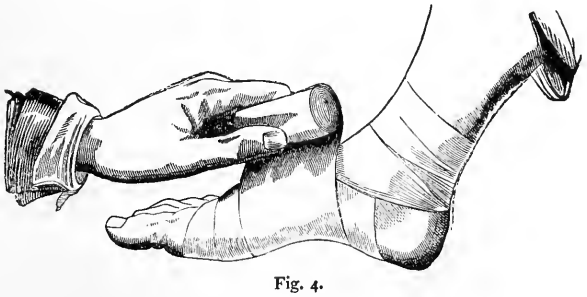


Fig. 4.

"VII. **For the Foot.** Let the roller be first passed round the flat of the foot—between the toe and heel—and then carried up round the ankle, and back again round the foot exactly as depicted in Fig. 4.

The bandage should always be brought up on the inner side of the instep as shown in Fig. 4, in order to support the arch of the foot.

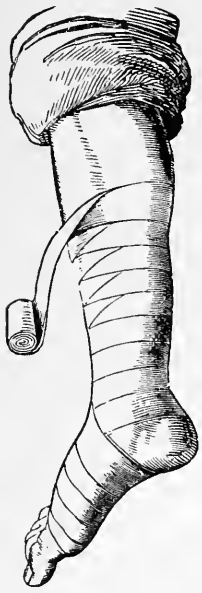


Fig. 5

"VIII. **For the Leg.**—After the foot and ankle have been well enveloped, let the bandage be carried up the leg, and be turned sharp on itself on the calf, in order that it may lie closely and the folds not be separated. (Fig. 5.)

"IX. **For the Knee.**—To support the knee, in ordinary cases, a bandage may be passed round it in a figure-of-eight form, excluding the patella, or knee-pan. (Fig. 6.)

If that bone is to be covered the bandage must be passed lightly over it afterwards, several times, making turns when necessary, to procure smoothness. When it is merely wished to keep on dressings or give slight support, the four tailed bandage shown in Fig. 7 may be used. A piece of linen a yard and a half long and eight or nine inches wide is split up in the middle at each end to within a few inches of the centre. The centre being then placed on the patella, or knee-pan, the four tails are brought under the knee, crossed, and tied two and two.

Fig. 6.

"X. **For the Groin.**—Having passed a roller round the lower part of the abdomen and secured it with a stitch, bring it in front of the affected groin, then round the back of the thigh, next round the abdomen and so on in a figure-of-eight form with the folds crossing each other over the groin.

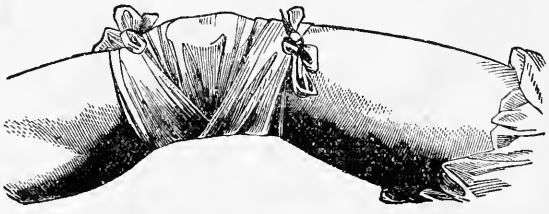


Fig. 7.

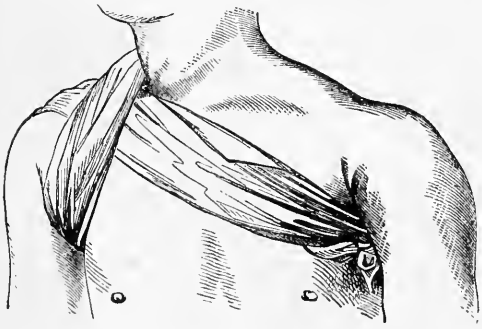


Fig. 8.

"XI. **For the Axilla** (*Arm pit* or *shoulder*). In order to keep on dressings put the centre of a common handkerchief folded crosswise under the arm pit, cross it over the shoulder, and carry the ends one before and one behind the chest to tie under the opposite arm-pit.

"XII. **For the Head.**—A roller having been carried horizontally round the forehead and back of the head and secured by a stitch, let it be carried from the side vertically over the head and under the chin. At the point of crossing on either side, let it be secured by a stitch. In bandaging the head care should always be taken to comb the hair so that it will lie smoothly and comfortably; and likewise to arrange the bandages so that the pressure may tell exactly where it is required."

Bandages should always be applied with an equable pressure throughout, and not too tightly. Any person possessed of the slightest ingenuity or neatness of hand, would, after a few hints from a good hospital nurse or a surgeon, learn the essentials of bandaging in a very short time. Bandages such as the above, may be rendered hard and strong by smearing their

successive turns with gum, plaster of Paris, glue, paste, or white of egg, which speedily sets, serving the double purpose of bandage and splints. (*See* FRACTURES.)

BANK.—It is well for the inexperienced to know that banks do not pay money to holders of checks and drafts unless some officer knows the holder to be the person he professes to be. They even often decline checks payable to bearer, unless they are satisfied that the holder came by them properly. Neither do banks take from unintroduced strangers deposits subject to check, though they will usually receive cash from a stranger, giving him in turn for it a "Certificate of Deposit" payable to bearer or to the order of any person named. These certificates of deposit can be indorsed and passed from hand to hand or sent by mail, just as checks are. (*See* CHECK.)

BANTING'S CURE.—The name given to a system of dietetics devised by William Banting, a London merchant (though it is identical with that previously recommended by Brillat-Savarin), for the cure of corpulence. Its merits have been very energetically disputed, and it has lately as a whole fallen rather into disrepute; but Banting cured himself by it, and was evidently an enthusiastic believer in its efficacy. The method consists in the use of a large proportion of nitrogenous animal food, and abstinence from all farinaceous, saccharine, or oily matters, which conduce to the production of fat in the human system. He especially forbids the use of bread, pastry, potatoes, milk, butter, beer; sweet wines, such as port wine, champagne, and the like; pork, herrings, eels, salmon and other fat fish and meats; and recommends lean meat, poultry, game, fruit, dry toast, claret, dry sherry, madeira, all green vegetables, except parsnips, beets, turnips, and carrots; permitting the moderate use of soft-boiled eggs and cheese. He rightly considered diet the principal agent in reducing corpulence; and, unlike those who profess to be his followers, left the *quantity* of food to the natural appetite.

BARBERRY.—A species of berry which grows wild in woods and shady places, and though not very abundant, can generally be found in market in September and October. The fruit is crimson in color, grows in clusters, and has small roundish seeds. It is extremely acid and sour, but makes a cooling and grateful drink; and is used for pickles, sweetmeats, jellies, soups, and garnishing. The leaves of the plants are eaten as a salad and taste something like sorrel. The jellies and sweetmeats made of barberries are considered very wholesome and strengthening to the stomach. (*See* JAM, JELLY, and PRESERVES.)

BARLEY.—One of the cereals, next in importance to wheat, over which it has the advantage that it can be grown over a greater range of climate, at less cost of labor, and with the certainty of much larger returns. On fairly good soil it frequently yields as much as 40 to 1, and in California three or four successive crops are reapedf rom one sowing. Barley was one of the chief articles of food among the ancients, is still used largely on the continent of Europe, and to a considerable extent in Scotland and Northern England; but with us it is rarely used except for feeding cattle and barn-yard stock, and for the manufacture of beer. Barley hulled and ground makes a coarse, heavy kind of bread, wholesome to eat, and not disagreeable in taste. Its nutritive value is not equal, however, to wheaten bread; and despite its cheapness it is not very likely to become soon a staple article of our diet. The only forms in which it is used in cooking are the preparations described below.

Pearl Barley, the kind kept in the stores, is the small round kernel which remains after the skin and outer portions of the kernel have been ground off. For this purpose, the Spring barley is chosen; it is steamed to soften the skin, dried, and passed through a mill of a peculiar kind to take off the husk, all except what lies in the deep furrow of the seed. It makes excellent broth, is much approved as the farinaceous ingredient in puddings, and when boiled with new milk and flavored with sugar, and occasionally spices, makes a delicate and delicious food more nutritious than rice.

Patent Barley is the pearl barley ground to flour.

Infants (Barley for).—Barley will often agree with infants when their stomachs reject milk. To prepare, take two tablespoonfuls of pearl barley, carefully washed, soak it half an hour in a little lukewarm water, then stir it without straining into two cupfuls of boiling water. Add a pinch of salt; simmer an hour, stirring often; then strain, and sweeten with two teaspoonfuls of white sugar. This is an excellent substitute for milk during infantile diarrhœa.

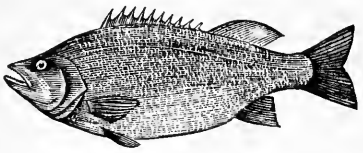
Sugar (Barley).—Properly speaking, barley sugar is sugar boiled in barley water till it is of such consistence that it will solidify when cold. When done flavor with lemon peel, pour into a greased dish, and as it cools cut into such shapes as may be desired. Ordinary sugar candy is also sometimes called barley sugar. (*See* CANDY.)

Water (Barley), is a very soothing and nutritious drink for the sick. To make, take two ounces of pearl barley, put it in half a pint of boiling water, and let it simmer five minutes; then pour off the water, add two quarts of boiling water, two ounces of sliced figs, and two of stoned raisins, and boil till it is reduced to a quart. Strain, and it is ready to drink. A simpler way is to take two and a half ounces of pearl barley and boil ten minutes in half a pint of water; strain off this water, add two quarts of boiling water, and boil down to one quart. Then strain, and flavor it with sugar and slices of lemon or nutmeg.

BASIL.—A highly aromatic herb, often used in cooking, with a flavor resembling cloves. It grows wild nearly everywhere, and there are two or three varieties. The common kind is seldom made use of, but there is a large species,

the leaves of which are used very generally in flavoring salads and soups, especially mock-turtle soup.

BASS.—A family of fish, of which there are about a dozen varieties caught in American waters. The best salt-water bass are the *Sea-bass*, or blue-bass, the *Striped-bass*, or rock-fish, and the *Bar-fish*. Of the fresh-water species, the best are the *Black-bass*, the *White-bass* of Lake Erie, and the *Rock-bass*. In the seacoast markets those who ask simply for bass will get the striped or streaked bass, and it is one of the most delicious of fish. They are to be had at all times of the year. For frying,



those from one-half to one pound weight are best; for broiling, select those weighing about three pounds and split them in half; for boiling, take those weighing from four to eight pounds. The very large fish are generally coarse and rather dry eating.

Baked Bass.—Take a fish weighing six or eight pounds; it should be cooked whole to look well. After cleaning, fill the body with a dressing made of bread-crumbs, pepper, salt, onion, and parsley, and a little salt pork chopped fine, the whole mixed with one egg; sew it up and lay it in a large pan. Put one pint of water and a little salt into the pan, and bake an hour and a half, basting often with butter and flour,—then dish, being careful to take the fish up whole. Shake into the gravy a little flour, a teaspoonful of butter, and two spoonfuls of tomato or walnut catsup; boil a moment, and pour it over the fish. Worcestershire is also a nice sauce for baked bass.

Boiled Bass.—Take a fish weighing seven or eight pounds; clean and scrape off the scales; wash it in salt and water,—then place in fish-kettle, with enough boiling water to cover it. Boil it half an hour, and serve hot with anchovy, caper, matelote or tomato sauce.

Frying and Broiling.—Proceed as in general directions given under FRYING and BROILING.

BASTING.—This is the most important of all the requisites for roasting, and it is for want of its being properly done that roast meats are so constantly spoiled. In fat meats, such as beef, mutton, or pork, their own dripping, after it has run into the well of the pan, is the best thing for the purpose; but in poultry, veal, and game, there is nothing coming out which will serve, and they must be basted either with plain *butter*, *mutton*, or *beef dripping*, *water and salt*, *milk*, *melted butter*, or sometimes with *cider*, *ale*, or *wine*. The process consists simply in pouring the liquid, or spreading the fat, over the entire surface of the roasting meat.

BATH.—The skin of the human being is not merely an outward covering for the body, but an organ the proper performance of whose work is of vital importance to good health. Its seven million pores are not a useless part of the animal economy, but form the sluices through which the system throws off a portion of its waste and deleterious matter; this matter is removed in the form of an imperceptible watery vapor, mixed with a few saline and gaseous substances, and the quantity capable of being gotten rid of in this way, in the space of twenty-four hours, amounts in round numbers to twenty ounces. The retention of this, by reason of the inability of the skin to perform its functions, is of course productive of great injury to the system, throwing more than their due share of work on the other secretive organs. The only method of keeping the skin clear and in proper working order is bathing with sufficient frequency. Bathing not only removes the matter which the skin has already discharged, but stimulates its activity and increases its efficiency. The *temperature* of the water is a highly important circumstance, and medical writers usually classify baths as cold, warm, and hot.

Cold Bath.—The cold bath is taken in water which is cold as compared with the normal heat of the body, or at a temperature of 33° to 65°. The effect of such a bath on a person in good health is, on first plunging in, a sensation of extreme cold (the duration of which depends on the temperature of the water and the condition of the bather), and is followed by a reaction which brings on a sensation of warmth and a feeling of lightness and vigor. By degrees, if the body continue to be immersed, the bather again begins to feel cold, chilliness, accompanied by shivering, comes on, the pulse grows feebler and slower, and the whole body becomes languid and powerless. The time to leave the bath is during the period of warmth, before the second chilliness begins; and immediately on stepping out the bather should rub himself dry with a coarse towel, and continue rubbing till the skin is in a glow. The ultimate effect of the cold bath has been differently described by different physicians, and some are strongly opposed to its use at all; but, where it agrees, it is tonic and bracing, it improves the digestion, stimulates the skin, and renders the circulation more active and vigorous. It also hardens the system and causes it to be much less sensitive to changes of temperature, being on this account an excellent protection against taking cold on exposure. Its beneficial effect depends much on the strength of the reaction; if, therefore, on coming out of the cold bath, the person feels dull and chilly, or complains of headache, or a sensation of tightness across the chest, the cold bath disagrees, and should be discontinued or modified.

But many persons experiencing these symptoms seem to need just the sort of stimulus the cold bath gives. This they can get by applying cold water with a wash-rag to a square foot or two of the skin at a time, rubbing the space into a glow with a towel, and repeating the

process until the whole body has been bathed. *The writer knows instances where this method has cured people too sensitive to cold.*

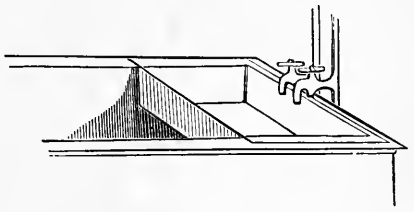
The diseases for which cold baths are valuable as a remedy are morbid irritability and sensibility, accompanied by general debility; also for asthma, in the intervals between the paroxysms, when the system is in other respects in a proper condition for it. When there is a tendency to colds and rheumatism, the cold bath is an excellent preventive; for this purpose it should be used continuously throughout the year. It is improper in the case of those who have a tendency to consumption, or who are constitutionally liable to bowel complaints; and it should never be ventured on by any one suffering from chronic inflammation of the mucuous membranes of the bronchia and intestinal canal. The best time for taking a cold bath is in the early morning just after rising. But persons of feeble circulation in whom reaction does not readily follow, had better not take a cold bath before their breakfast is digested. (*See* DOUCHE BATH.)

Warm Bath.—This includes all baths ranging in temperature from 66° to 95°. Its effect is very different from that of the cold bath. There is no shock, but the temperature is grateful to the bather; the blood circulates more rapidly, and a gentle glow pervades the body; the skin absorbs water, is softened, and throws off the scales of decomposed matter which may have accumulated on it; pain is allayed, and nervous irritation is soothed. The warm bath is especially grateful and beneficial after excessive muscular exertion, or after the fatigue and excitement of travelling. It refreshes and tranquillizes the system; but on the other hand it has none of the tonic influence of the cold bath, and its frequent use tends to relax and debilitate, while rendering the system more sensible to changes of temperature. The best temperature for the bath of a healthy person is what is called *tepid*, and it is also the most agreeable. A distinctly warm bath taken just before going to bed will probably cure any tendency to wakefulness, especially if the wakefulness come from over use of the brain. No bath whatever should be taken while digestion is going on—say in less than two hours after a meal.

Hot Bath.—This has a temperature ranging from 98° (blood-heat) to 112°. It is a very powerful stimulant, and should never be used by persons in a good state of health. Even in cases of disease, it should only be taken under a physician's advice. As the object is to stimulate the vital actions, the bather should never remain long enough in the bath to produce exhaustion,—the average time is from ten to fifteen minutes. The best way to obtain the full beneficial effect of the hot bath is to commence with tepid water and gradually increase the temperature. The hot bath is chiefly used where it is desirable to produce abundant perspiration, when it should be followed by rolling the patient in blankets.

Shower Bath.—When cold water is used, the effect of this bath is similar to that of the ordinary cold bath, but the shock from the shower bath is greater than that from simple immersion, especially if the quantity of water be large, the temperature low, and the fall considerable. Its effects are also more speedy, and extend more to the internal organs than those of the common bath. When the result is beneficial the glow is felt almost immediately, consequently when recourse is had to it, the bather should withdraw immediately after the shock; if its use is prolonged it quickly lowers, and at last destroys the sensibility, and is then highly injurious. For delicate persons, the tepid shower bath is preferable; and salt added to the water is an improvement. When used for hygienic purposes the best time to take the shower bath is immediately after rising in the morning.

Sponge Bath.—Sponging the body off with water and a sponge or cloth is as effectual, though perhaps not as pleasant, as any other form of bathing, and may be resorted to when bathing conveniences are not at hand. It is frequently adopted in cases of fever, to cool the surface of the body; but as its action is powerful it is rather venturesome to employ it except as directed by the physician. Sponging is also used successfully as a tonic to ward off disease. It is found especially serviceable when a person is disposed to asthma or is suffering from a cough. For this purpose the chest may be sponged daily, and afterwards well rubbed and dried, so as to produce a glow on the surface. In some cases vinegar and water, or salt and water are preferable, and then much rubbing is not necessary. This is an excellent method for bathing very young children. In the country or in the city houses



Sponging Bath.

on high ground, in both of which places economy of water is apt to be an object, or in all cases where expedition is desirable, the following arrangement is recommended: Have a tin pan made six inches deep, half an inch shorter than the width of the bath tub at the top, and wide enough to extend a good distance beyond the faucets. On the two short sides and on one of the long sides, let it have a rim an inch wide with the edge of the rim rolled over a substantial wire to give strength. Slide this pan under the faucets. It will be supported by the edges of three sides of the bath-tub coming under its rim. Supply it from the faucets and pour the water over the body from a large sponge. Thus very little water need be used

and its temperature can be easily regulated. With most people it will be best to begin with it pretty warm and to let the cool-water faucet run so as to cool it gradually while it is being applied. If the outlet of the tub is stopped before the bath is begun, the water thus poured over the body and collected in the tub, will be all that is needed for the feet. It is well to wash the face in cool water before beginning on the rest of the body.

Sea Bathing.—Although the most important effects of bathing are produced by the temperature of the water, there can be no doubt that the effect of simple fresh water is very different from that of the sea. Where the object is to bring on a reaction, and to stimulate and brace the system, sea bathing is greatly to be preferred. The manner of going into the bath, and the time of remaining in it, depend chiefly on the condition of the bather. Some plunge in at once in order to obtain the full advantage of the shock; others are recommended to take at first one or two dips, to test the power of reaction, and gradually to immerse the entire body in water. In any case the head should be wet thoroughly before the feet become chilled. Moving about as much as possible while in the water is highly advantageous, and if the bather can swim, all the better. On coming out, the body should be quickly and well dried with a coarse towel, and the clothes put on without delay; though this precaution is not so necessary as when bathing in fresh water, as the particles of salt remaining on the skin after the water has dried, stimulate it even more than rubbing. The most common error in the practice of sea bathing, and one which should be carefully avoided, is remaining so long in the water that the heat of the body is lowered below the proper degree, and the consequence is a feeling of chilliness that is both disagreeable and injurious. The only time of the year adapted for sea bathing on our coasts, north of Florida, is the summer and autumn months; the best time of day depends on the locality and on the state of the tide, which should be taken at the full. Under no circumstances, however, should a bath be taken in less than three hours after a hearty meal. (*See* RUSSIAN, SITZ, TURKISH, AND VAPOR BATHS.)

BATH BRICK.—A preparation of calcareous earth, sold in the shape of a brick. It is much better than sand for scouring knives and forks, brass and tin ware, and the like: the particles are not so hard, but are readily crushed into smaller pieces in the process of rubbing, and do not leave scratches, while they have sufficient hardness to remove a portion of the surface. In using, scrape off a portion with a knife, and apply with a damp cloth or cork; when it can be had, a corn cob makes the best of all scrubbers.

BEANS.—The only beans used to any extent in cooking are the string or "snap," the Lima, and the kidney. All these are easily raised; they will grow abundantly in the open fields along with corn. But to obtain them at their best they should be planted as soon as the frost is out of the ground, in a rich deep soil which they do not exhaust and in which they grow rapidly. Plant three at a time, in holes three inches deep; three feet apart for the dwarf, and four feet for the running vine. When the leaves above the seed leaves are fully out, hoe between the plants to loose the soil and remove the weeds; after they get a foot high the weeds cannot hurt them. Snap or string beans, grown either as "pole beans" or as "bush beans," are plucked young and eaten in the pods. They are ready for the market in the South about the first of April and continue with a succession of crops until November. The Lima and kidney beans come in about the 1st of May, and continue throughout the year, although during the winter months they are apt to be hard and dry.

To Dry.—Lima beans pulled while young and tender and dried in the sun, may be put away and kept for use at any time. They should be thoroughly soaked before using.

Kidney Beans.—Shell into cold water; boil until tender with a piece of fat bacon. Serve bacon and beans together.

Lima or Butter Beans.—Shell into cold water; let them lie awhile, and then put into a pot with plenty of boiling water, and a little salt, and boil fast, until tender. Drain, and butter well when dished, peppering to taste.

Pork and Beans.—Put a quart of dried white beans over the fire with two quarts of cold water; after boiling a few minutes drain and add the same quantity of boiling water. When the skins begin to crack, drain the beans and put them in a "bean pot" or in a deep baking dish; place in the centre a pound of sweet pork, the rind carefully scored in small squares; pour a quart of hot water over the whole and bake slowly, for three hours.

Some persons think this dish improved by a spoonful or two of molasses added while baking.

Salad of Snap Beans.—Boil as above till tender; put them in a crockery dish, a few at a time, and sprinkle with salt and pepper; then cover over and leave to stand three or four hours. Drain out the water; put the beans in a salad-dish with sweet oil, vinegar, and parsley chopped fine; and serve cold.

String Beans.—Prepare by breaking off both ends, and after "stringing" pare both edges with a sharp knife. Then cut the beans into pieces an inch long, soak in cold water with a little salt for twenty minutes; drain them and put into a sauce-pan of boiling water, boil quickly about forty minutes, or until tender. Drain in cullender until water ceases to drip from them; and dish with a large spoonful of butter. The taste of beans is greatly improved by boiling a bit of bacon with them; though it is not necessary.

BEAR-MEAT.—The flesh of the black bear is the only kind ever offered for sale in our markets, and this can generally be had in the late fall or winter months, some years in great plenty. It is very nutritious and heating

to the blood, digests easily, and has a decided but very savory taste. The flesh of a young bear, nearly grown and rather fat, is considered the best. It can be had cut into steaks, but is best roasted. Cook like beef or venison, and serve with some highly-spiced sauce.

Bear-Hams.—These can be had at any time, preserved like pork, and make a very popular and excellent dish for exceptional occasions. Cook and serve like ordinary hams.

BEAR-SKIN.—A very thick woollen cloth, with a long nap or pile, dyed various colors, and used for making overcoats, cloaks, and other heavy clothing. It should be shrunk thoroughly before cutting.

BED-BUGS. (*See* BUGS.)

BEDROOMS.—Rooms devoted to sleeping purposes should above all things be light, cheerful, and thoroughly ventilated. A third of our lives is necessarily spent in these rooms, and where the current practice of reserving the parlor for "company" obtains, a great deal more. An ample supply of fresh air should be secured at all times and everywhere, but its necessity is peculiarly urgent in the case of bedrooms. We are much more susceptible to injurious influences when asleep than when awake, and these accumulate with startling rapidity in an unventilated chamber in which two or more persons spend the night. An excellent plan is to open the window above and below; lowering the upper sash, with an opening over the door, is also very effective. But if the bedroom have no fireplace, it should be connected by tubes with the chimney-flue. At the same time the prevalent notion that a bedroom to be healthful must be cold is altogether mistaken. No room should be slept in in winter that has not had a fire in it at least three times a week, and it is all the more wholesome if it have one every day. Warmth is in itself necessary to any thorough ventilation; and the temperature of a bedroom should not be suffered to fall below 40°. (*See* FURNITURE.)

BEDS AND BEDDING.—For beds an elastic material is required, with a variation in its heat-conducting powers according to the season of the year and the age of the individual. Thus, the infant and the aged, in both of whom vitality is low, require the slowest conductor that can be procured, especially in the winter season. For the middle-aged on the other hand, the same material which is desirable for the first and last periods of life, would be much too warm and relaxing. In the order of their conducting powers the various materials for beds stand as follows, beginning with the warmest or slowest conductor: 1st, *down;* 2d, *feathers;* 3d, *wool;* 4th, *wool-flock;* 5th, *hair;* 6th, *cotton-flock;* 7th, "*excelsior;*" 8th, *sea-moss;* 9th, *paper-shavings;* and 10th, *straw.* Hence it follows that the first two are peculiary fitted for the very young and the old; while wool and hair, holding an intermediate position, are best adapted for healthy persons of middle age. Where a particularly cool mattress is required, as for those who perspire freely, or for warm weather, the sea-moss and paper-shavings are the best materials; and as the latter can be obtained everywhere, a mattress made of it is often a very grateful addition to the furniture of a bed. Feathers and down were formerly almost universally employed for beds in this country, but their place is now largely supplied by wool and hair, which are sufficiently soft for comfort and not hot enough to promote perspiration. Wool mattresses are very healthy and pleasant to lie upon, though at first they feel rather hard and unyielding to those accustomed to feathers; by placing a spring mattress under them they are rendered yielding enough for any one. The best of all materials for beds, however, is *hair.* It is more healthy than feathers, more comfortable than any of the cheaper materials, and is equally serviceable in summer and winter. Mattresses of it can be made thick or otherwise according as springs or other mattresses are used; and though expensive, the same hair can be made over several times and so made to do many years' service. Straw mattresses are seldom used except for putting under hair or feather-beds; where used for a top mattress the straw is generally mixed with moss or cotton. For the cheaper kinds of beds the material called "excelsior" is superior to any other.

Springs add greatly to the comfort of a bed, and they can be had now in any style and at almost any price. Their cost is but little more than that of an under mattress, which can then be dispensed with. But the "spring mattress" should never be used; it almost inevitably becomes the harbor of bed-bugs and other vermin which cannot be got at without destroying the mattress. The "woven-wire mattress," a recent invention, is probably the most perfect apparatus of the kind ever devised, and though expensive, will stand many years of ordinary use. The only objection to it we have heard is that when used long by heavy people it is liable to "sag."

Pillows are seldom made of any other material than feathers, though hair, sponge, or chipped cork, is occasionally used. Feather pillows should never be stuffed very full, as this gives them a hardness and inelasticity which is peculiarly disagreeable and also injurious. In buying them it is best to choose the feathers first and have them made up to suit; select goose or chicken feathers of the softest and most downy kind. Hair pillows are cooler than feather, though not so soft and yielding. They are recommended for persons with a tendency to fulness in the head, and for all young children. It is necessary to make them lower than those made of feathers. An excellent pillow for invalids or feeble persons is sold at the drug stores in the shape of an india-rubber sack, which can be inflated with air to any desired degree of flexibility.

Sheets were formerly almost universally made of linen, but experience has proved that cotton is much better. Linen in any shape, when brought into contact with the skin, con-

ducts away the heat of the body very rapidly. In winter in our climate linen sheets are scarcely endurable on account of their coldness; and, being comparatively impervious to air, and therefore confining perspiration, are inferior at all times to cotton.

The best material for sheets is "Russian sheeting;" it will last twice as long as any other, and though yellow at first will soon bleach. It is a mistake to make sheets exactly to fit the bed. They should be about a yard larger each way than the bed.

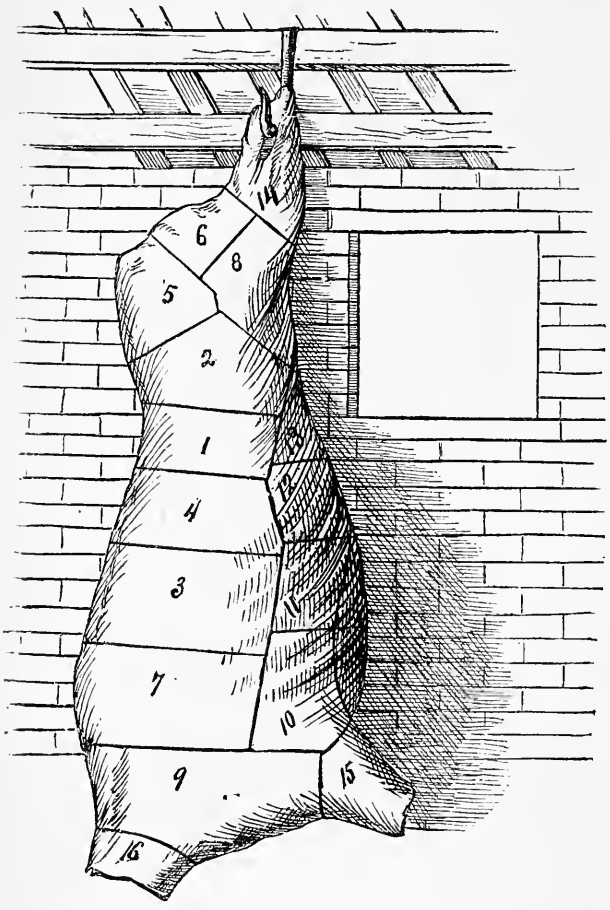


Figure of a Choice Animal for Beef.

Pillow-Cases of linen are very pleasant to the head, and may be appropriately used with cotton sheets. They are a luxury at best, however, rumpling easily and requiring more frequent change than cleanliness alone would call for. A popular method of arrangement is to make the pillow-cases of cotton and cover the pillows during the day, while they are not in use, with linen "shams"—simple squares of linen which may be very tastefully ornamented.

Blankets are treated of in a separate article. (*See* BLANKETS.)

The materials of which beds and bedding are composed are peculiarly liable to attract moisture and become damp, and this is another reason why bedrooms should be thoroughly ventilated. To sleep in a bed not perfectly dry is to invite disease; therefore all bed-clothes should be carefully aired every day. The bed itself should be turned over, and the sheets, blankets, and other covering, spread out on chairs for at least an hour each morning.

BEDSTEAD.—The different woods of which bedsteads are made, and various other styles, are treated of in the article on FURNITURE. We have only to add here that there is perhaps no single article on which a large amount of money makes so little show, and that a comparatively plain bedstead, constructed on proper principles, has a much better effect than some of the most elaborate and costly of current styles.

Iron Bedsteads are made to fold together in small space, and are extremely durable and easy to keep clean. For these reasons, they serve admirably for servants' rooms, or any rooms where ornament is not sought after; though wooden cots are preferable, as they do not rust.

Bureau Bedstead.—A bedstead so constructed as to fold up into the exact resemblance of a bureau or bookcase. It is designed for sitting-rooms, or bed-chambers used as sitting-rooms; and though rather clumsy to handle subserves the purpose admirably. It is patented and held at rather high prices.

Sofa Bedstead is constructed on the same principle as the one above-named, and is a sofa by day which can be converted into a very comfortable bed at night. The sofa bed harbors bugs.

BEEF.—In nearly all parts of the world beef is popularly regarded as the most nutritious kind of flesh, and although this opinion was formed without the aid of science, it is so far true that in the carcass of the ox or cow there is a larger proportion of flesh-forming material than in that of any other animal. It is of closer texture than any other kind of meat, so that if bulk merely be taken as the measure, there is more nutriment in a given quantity of beef; and it is also fullest of red blood juices. Besides this, the flavor of beef is richer and fuller than that of any other meat, so that its use not only affords greater enjoyment, but a sense of

satisfaction is obtained from a smaller quantity. It is also among the most digestible of meats, as it requires only about two hours and three quarters.

The ox or cow which is designed for beef is usually divided by the butcher into parts as shown in the cut on the opposite page, and subdivided when retailed. The names which we have here given to the different pieces are those commonly in use in the city of New York and vicinity; and although they differ somewhat in a few instances from those in use in various other cities, yet they will probably be sufficiently well understood by experienced butchers in all parts of the country.

1. Porterhouse steak; 2. Sirloin; 3. Middle ribs; 4. Fore ribs; 5. Lump; 6. Mouse buttock; 7. Chuck ribs; 8. Round; 9. Clod; 10. Shoulder; 11. Brisket; 12. Thin flank; 13. Thick flank; 14. Leg; 15. Shin; 16. Neck, or sticking-piece.

In choosing beef select that which has a loose grain with bright red, lean, and yellowish fat; this will be *ox beef*. Good *cow-beef* has a little firmer flesh, whitish fat, and meat not quite so red. Inferior beef, that which comes from ill-fed cattle or cattle too old for food, may be known by a dark red color, a hard, skinny fat, and in old animals a horny gristle running through the meat of the ribs. A very good test of beef and one easily applied, is to press the lean meat with the finger; when the dent made by the pressure rises up quickly, the meat is from an animal in its prime, but when it rises slowly or not at all, the animal was old and the meat is of inferior quality. One rule which housekeepers should bear in mind always is, that the best meat and the prime parts are cheapest in the end. There is a greater proportion of gristle, bone, and hard meat in the inferior joints; they may serve as the basis of soups, stews, and the like, but it is false economy to buy them for roasting or boiling

To Corn Beef.—Take the thick, lean parts and cut into pieces of five to ten pounds each; those with a streak of lean and a streak of fat are the choicest. For each twenty pounds of beef take three pounds of common salt, an ounce of saltpetre, and two tablespoonfuls of brown sugar; pour in enough water to cover the whole. Beef may also be corned by simply rubbing in salt that has been dried before a fire. For ten pounds of beef take a pound and a half of common salt, rub in thoroughly, and set the meat in a salting dish and keep in a cool place; the brine that melts should be returned upon the meat every day, and if it is desired to have it red, add a little saltpetre. The length of time it is to remain in the salt depends upon how long it is to be kept, usually from three to ten weeks.

To Smoke Beef.—In cool weather hang up the beef for three or four days, till it is tender, but take care that it does not begin to spoil; then cure in pickle as in corned beef, adding a little pepper and allspice; afterwards roll it tightly in a cloth and hang for a fortnight or three weeks in the chimney-place or over a smouldering wood fire. The lower part of the thigh is the best piece for this purpose; and it will keep for a long time.

A la Mode Beef.—I. Take a round of beef; remove the bone, and trim away all the gristle you can reach, and the rough outer edges. The meat should then be tied up round with a strong string or strip of muslin. Have ready a pound of fat salt pork, cut into strips about the size of the middle finger and long enough to reach through the round of beef. Put half a pint of vinegar into a sauce-pan over the fire; season with three or four minced shallots or button onions, two teaspoonfuls of mustard, one of nutmeg, one of cloves, half a teaspoonful of allspice, half a teaspoonful of black pepper, a bunch of sweet herbs cut fine, and a tablespoonful of brown sugar. Let all simmer five minutes then boil up once, and pour while scalding hot upon the strips of pork, which should be laid in a deep dish. Let all stand together until cold. Remove the pork to a plate, and with the liquor remaining in the dish mix enough bread-crumbs to make a tolerably stiff force-meat. With a long thin-bladed knife, make numerous incisions in the beef, and into these, thrust in the strips of pork so far down that the upper ends are just level with the surface, also work into each cavity a little of the force-meat. Proceed thus until the beef is fairly riddled and plugged with the pork. Fill the hole from which the bone was taken with the dressing and bits of pork, and rub the upper side of the meat with the force-meat. Put into a baking pan, with a little water to prevent burning; turn a large pan over it to keep in the steam, and roast slowly for five or six hours—allowing half an hour to each pound of meat. Do not remove the cover except to baste (which must be done often) until fifteen minutes before you draw it from the oven. Set away, with the string or band still about it, and pour the gravy over the meat. When cold, lift from the gravy, cut and remove the string, and send the meat to the table cold, garnished with parsley or nasturtium blossoms. Carve in extremely thin slices. This dish will keep for a week in winter, and in summer too, if kept in the refrigerator.

II. A simpler way of making *à la mode beef* is this: Take a round of beef and cut numerous holes entirely through it; roll strips of raw salt pork in a seasoning made of half a teaspoonful each of thyme, cloves, salt and pepper; then draw these strips through the holes in the beef. Put half a dozen small onions into a sauce-pan with a quarter of a pound of butter and two tablespoonfuls of milk, and stew until soft (or the onions can be cooked separately); then put these onions with the beef into a pot, pour on just enough hot water to cover them, and let it boil slowly four or five hours. Just before taking up add a pint of

claret or port wine. This dish may be served either warm or cold.

Baked Beef.—Our so-called roast meats are almost invariably baked. To bake beef, select as for roasting. Have about a quarter of an inch of cold water in the bake-pan, and dash a little boiling water over the meat just before putting into the oven. If the meat is preferred rare, allow a quarter of an hour to each pound; if well done, almost twenty minutes. The thin portions of the meat should be covered with paper or it will be cooked to death; Professor Blot also recommends that a sheet of buttered paper be placed over the top. This paper will keep the top of the meat moist, and prevents it burning or drying; it should be basted often or it will scorch. Serve on a hot dish like roast beef.

Boiled Beef.—If the meat be fresh put it into boiling water at the start; if salt, put in cold water. Let it boil gently but steadily, and if there be occasion to add more water be careful that it is *boiling* water; remove the scum as it rises, especially at the start. A tablespoonful of salt added brings the scum to the surface. The time allowed for boiling is a quarter of an hour to each pound of meat, and when once thoroughly done do not let it boil a moment longer.

Bouilli (Beef).—Put six pounds of brisket or round (whole) into a pot, with three carrots, one turnip, an onion, and some celery, all cut small; cover with cold water and set on to boil; as the scum rises remove it carefully. Keep it simmering for three or four hours, adding hot water as the water boils away; then draw off most of the soup and set it aside to cool. To the soup more vegetables, previously cut small and boiled by themselves, may be added; or it may be served in a tureen with vermicelli. The meat, from which the bones should be removed, may then be served, garnished with the vegetables boiled with it. A sauce, made of the soup thickened with flour and butter and flavored with mustard and the vinegar of pickled walnuts, is sometimes served with the meat.

Corned Beef, Boiled.—The brisket is the most economical piece for a family dinner, but the round is excellent. Wash the meat in three or four waters (cold) and scrape all the salt from the outside; put into a pot and cover with cold water; allow twenty minutes to each pound, and turn the meat three times while cooking. When done, drain very dry, and serve with drawn butter. Turnips or cabbage should be served with corn-beef; they may be boiled with it, or separately.

Corned Beef, Boiled with Peas.—Take six or eight pounds of corned beef, wash in cold water; put it in a large pot filled with cold water, and add two quarts of dried peas. Let them boil till soft, and then season with sweet herbs; or it may be served with no other seasoning than a little pepper and the salt of the meat.

Dried Beef (with Cream).—Chip the beef thin and fine, with a knife, or on the potato slicer; measure a pint, without pressing; cover with cold water; heat slowly and if very salt let it simmer a moment; drain off the water, add a gill of rich cream and season with pepper. Lacking cream, use milk with one ounce of butter and a teaspoonful of flour. Served on split crackers or toast it requires more dressing.

Hash (Beef).—Chop cold roast beef or steak or boiled corned beef fine; add half as much mashed potatoes (or potatoes cut into bits), a little melted butter, pepper, salt, and milk. Turn all into a frying-pan and stir together until it is heated through and smoking hot, but not until it browns; put into a deep dish and if stiff enough shape as you would mashed potatoes into a hillock. Or, cease stirring for a few minutes, and let a brown crust form on the under side; then turn out whole into a flat dish, the brown side uppermost. Or, mould the mixture into flat cakes; dip these in beaten eggs, and fry in hot drippings.

Heart (of Beef).—Wash the heart well, and cut into half-inch squares; stew them ten minutes in enough water to cover them; throw in a little salt to draw out the blood, and skim it off as it rises to the surface. Take out the meat and strain the liquor; then return the meat to it with a sliced onion, a tablespoonful of catsup, some parsley, a pinch of cayenne pepper, a head of celery chopped fine, and a large lump of butter. Stew until the meat is tender, and then stir in a tablespoonful of browned flour. Boil up once, and serve hot.

Kidneys (of Beef).—Cut the kidney in four pieces, trim off as carefully as possible the cartilage and fat that are inside. Trim and cut into thin slices; place on the fire with enough cold water to cover; as soon as they boil, remove them and carefully wash in plenty of cold water; drain them free of water, put them in a *sautoir* with 2 oz butter, and 2 oz onion, cut fine; brown well over a sharp fire, then add 1 oz of flour, shaking it well together, a gill and a half of gravy or broth, a glass of Madeira, and two tablespoonfuls chopped and blanched parsley. Boil a minute or two. Dish up on an oval *cronstade*, arrange six or eight heart-shaped *croûtons*.

Liver (of Beef).—Cut in slices half an inch thick, pour boiling water over it, and boil it with half as much salt pork cut in thin slices, and dipped in flour; then cut up the liver and pork into small bits, put them into a frying-pan, with a little butter, pepper and salt, and stew three or four minutes. Serve hot.

Pie (Beef).—Take cold roast beef or steak, cut into thin slices and put a layer into a pie-dish; shake over it a little flour, pepper and salt, and add a tomato or an onion cut very fine; then another layer of beef and seasoning; and so on until the dish is filled. If you have any beef gravy, put it in; if not, a little beef drippings, and water enough to make sufficient gravy. Have ready a dozen potatoes, boiled and mashed, half a cup of milk or cream, and a little butter and salt; mix. Spread it over the pie

as a crust, an inch thick; then brush it over with egg, and bake half an hour.

Pie (Beef steak with Oysters).—Cut three pounds of tender beef into little steaks; brown quickly in a frying pan; place them in layers in a baking dish, leaving the centre open; fill this with parboiled oysters, seasoned with salt and pepper; pour nearly all the fat from the frying pan; stir in a heaped tablespoonful of flour; add gradually a pint of thin gravy or broth and some of the oyster liquor; season with mushroom catsup and Harvey sauce; simmer until thickened, pour it over the beef; in half an hour cover with puff paste and bake an hour and a half.

Pie (Beef, with Potato Crust).—Take cold roast or corned beef, cut in bits, season with pepper and salt, and spread a layer in the bottom of a pie-dish; over this put a layer of mashed potato, and stick bits of butter thickly all over it; then another layer of meat; and so on till near the top of the dish. For the crust take a large cupful of mashed potato, two teaspoonfuls of melted butter, a well-beaten egg, two cups of milk, and beat all together until very light; work in just enough flour to enable you to roll it out in a sheet, and, having added to the meat and potato in the dish a gravy made of warm water, butter, milk, and catsup, mixed with cold gravy or drippings, cover the pie with a thick crust, cutting a slit in the top. Bake half an hour. The pie looks better brushed over with beaten egg before it goes to the oven.

Pie (Beef Steak).—Take a sirloin steak, beat until very tender, take off all the fat, cut strips, three inches long and one broad. Stew in enough water to cover, adding one medium-sized onion, grated, with salt and pepper to taste. Boil until half done, thickening the gravy with browned flour. Put in a deep dish, the sides of which have been lined with rich paste; cover with the same, slit the top, and bake until a light brown. It may, if desired, be seasoned with tomato catsup, or Chili sauce, and slices of hard-boiled egg added to the beef.

Roast Beef.—The best pieces to roast are the sirloin and thick ribs. Rub a little salt on it and first turn the bony side to the fire till it gets heated: then present the other side. The meat should be placed as close to the fire as possible without burning it, especially till the outer *crust* is formed; the sooner this crust is achieved the better and more juicy will be the meat. Baste frequently, at first with salt and water, afterwards with the drippings. If the roasting-piece be thick, allow about twenty minutes to the pound—if thin, a little less; in frosty weather the total time will have to be increased by half an hour. Roast beef may be served simply in its own drippings, with the fat skimmed off, and this is the best way; but if "made gravy" is desired, pour off the drippings half an hour before the meat is done, and thicken with a little brown flour, seasoning with salt and pepper to taste. It may also be served with fried potatoes placed all around the meat on the same dish, or in a separate one, with horse-radish, grated and mixed with the drippings; or with stuffed tomatoes, placed round the meat and covered with the drippings, with mustard used as a sauce, or with Yorkshire Pudding.

Steak (Beef).— The tenderloin and fillet make the best steaks, but the sirloin of a very good animal will furnish them only a little inferior. Steaks almost equal to those from the sirloin may be obtained from the rump; the next in favor are those cut from the hip. Generally speaking the best thickness for steaks is about three quarters of an inch. In preparing to cook do not pound or beat the steak with a steak-mallet, or stick it with a knife under the impression that you are making it tender; for if by this, or any other means, you make it more tender than before, you do so at the sacrifice of taste, juiciness, and appearance. It is much to be preferred that when you buy your steak you obtain it tender in the first place by having it cut from a good animal. If the steak is not a tender cut, such as one taken from the round, for example, it is better to stew than to broil it.

Steak (Beef) to Broil.—First be careful to see that the fire is quite clear, and at the same time not too great. Now open wide the draughts so the smoke will be well carried off. Have the gridiron very clean and smooth, make it warm and rub it over with a piece of suet; now lay on the steak, sprinkle a little salt on the fire to make it lively, and put the gridiron over it, keeping it close down on the range a few minutes to carbonize the surface of the steak, then turn it to carbonize the other surface. Now it is necessary to expose the steak to less heat, which may be done by turning on their edges two bricks and placing the gridiron on them. The steak should be turned often and carefully without sticking a fork into it on any account (tongs are best for this purpose). Do not use salt or pepper while cooking, as it liberates the juice, which is thus lost in the fire. When the steak feels rather firm to the touch it is rare, and if it is so to be served, remove from the fire to a hot dish upon which an ounce of butter has been melted (with a teaspoonful of lemon juice if desired), and salt and pepper to taste. Turn the steak on its dish, and send to the table at once.

Steak (Beef) with Eggs.—Cut the steak into pieces of convenient size, dip them in beaten eggs, rolled in bread-crumbs, and then broil. Serve either with potatoes or with tomato catsup.

Steak (Beef) with Onions.—Broil the steak, as above. Cut up six onions quite fine; put them into a sauce-pan with a cup of hot water, a tablespoonful of flour, enough salt and pepper to season, and a tablespoonful of butter; let it stew until the onions are quite soft, and then turn the whole over the steak quite hot.

Steak (Beef) with Oyster Sauce.—Broil the steak as above. Put the liquor of a quart of oysters into a sauce-pan, with two tablespoonfuls of butter mixed with a little flour, and let it come to a boil; turn in the oysters; let this boil up once, and then turn it over the steak, and serve hot.

Stewed Beef.—Beef may be stewed either whole or cut into small pieces; the cheaper joints will answer very well. There are many receipts for stewing; this is excellent and economical. Take a leg or shin of beef, leaving all the meat on, and put into a pot with about a gallon of water, adding a tablespoonful of salt. Let it simmer very slowly for several hours, till the beef is soft and falls from the bone, and the water is reduced to about two quarts. Then pare some potatoes, quarter them, and throw in with two teaspoonfuls of black pepper, two of sweet marjoram, and two of thyme. Add some celery or celery sauce, if it is to be had, and more salt if needed. Stew until the potatoes are thoroughly done. Finally throw in some dry bread, broken into small pieces; and when this is soaked dish the whole and serve.

II. A more elaborate dish may be made from five or six pounds of rump or ribs. Take a half-pound piece of salt pork, cut it into bits, and place in a sauce-pan with four sprigs of parsley, two of thyme, a clove of garlic, a sprig of sweet basil, two cloves, three carrots cut in pieces, salt, and pepper; put the piece of beef on the whole, wet with a glass of broth and one of white wine; season with six or eight small onions; place in a moderately heated oven, and put paste around the cover to keep it air-tight. Simmer about six hours; then dish the meat with the onions and carrots around it, strain the gravy on the whole, and serve. Almost any piece of beef may be cooked in this way.

Shin of Beef.—Put a shin of beef into a pot with eight quarts of cold water and a tablespoonful of salt; just before it comes to a boil skim it carefully; let it boil all day, and as the water boils away, add just enough (hot) from time to time to keep it from burning. When the meat is boiled to shreds, turn it out into a pan and pick out every piece of bone; then put back into the pot, season well with pepper and salt, cloves, allspice, and a little sweet herbs, and let it simmer half an hour; empty into a deep dish and set it away. When cold it will be as hard as cheese, and will keep a week in summer (on ice), and a month in winter. Serve cold with baked potatoes.

Tea (Beef).—Take half a pound of lean beef; cut into small pieces, add a pint of cold water and soak for two hours. Let the whole simmer for half an hour, then strain it. This preparation is superior in nutritive properties to the various extracts of beef now sold.

Tongue (Beef), Boiled.—A tongue, if salted or dried, must be soaked for some hours before cooking. Then put with cold water into a sauce-pan, and bring slowly to a boiling point; clear off the scum from the surface; and remove the sauce-pan from the fire so far as to reduce the boiling to a gentle simmering. If dried, a tongue will require about four hours boiling, if simply salted, only three hours. While hot, the outer skin of the tongue must be peeled off, and it is then ready for serving. Boiled turnips are a good accompanying dish. Boiled tongue is also excellent when cold.

Tongue (Beef), Roasted.—Parboil a tongue that has only been salted a few days; roast in the usual way before a hot fire, basting with red wine; spread butter over it when placed on dish. Serve with a rich gravy or some sweet sauce.

Tongue (Beef), Stewed.—Simmer it two hours in water just sufficient to cover it; then peel it and put back into the water, adding to it a half spoonful each of pepper, mace and cloves, tied up together in a piece of muslin. Cut three or four turnips and capers very small, slice three carrots, and add them also to the meat, with half a pint of beef gravy or drippings, a wineglass of white wine, and a bunch of sweet herbs. Stew all together slowly for an hour and a half longer; and then take out the spices and sweet herbs, and thicken the gravy with browned flour and a bit of butter.

Tongue (Beef), to Pickle.—Mix, in four gallons of water, a pound and a half of brown sugar and two ounces of saltpetre or saleratus; if it is to last a month add six pounds of salt, if all summer, nine pounds. Boil all together gently till done, skim, and then let it cool. Put the meat in the vessel in which it is to stand, pour in sufficient of the pickle to cover it, and set it away for use. Once in two months the pickle should be drained off, boiled and skimmed, and have half a pound of salt and two ounces of sugar added to it. This pickle is excellent for preserving either beef, pork, tongues, or dried beef.

Tripe (Beef), to prepare.—Scrape and wash several times in boiling water; then soak it a week in salt and water, changing the water every day. Boil it eight or ten hours, till tender; and then pour spiced hot vinegar over it. Tripe can generally be had of the butchers already prepared.

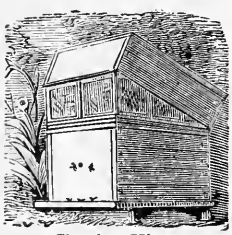
Tripe (Beef), Broiled.—Cut in slices of convenient size, dip them in lukewarm butter, roll in bread-crumbs, place on a gridiron, and set it on a moderate fire. Turn the tripe over as often as is necessary to broil it well, and serve with tomato sauce.

Tripe (Beef), Fried.—The honeycomb is the best for this. Cut into convenient pieces, wash them in salt and water (cold), and wipe dry; dip them in eggs and bread-crumbs, or Indian meal batter, and fry in hot fat. This dish is greatly improved if served with oyster sauce poured over it.

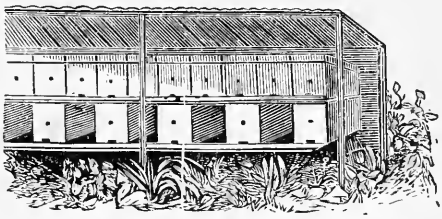
Tripe (Beef), Stewed.—Professor Blot recommends this: Put in a stew-pan two ounces of salt pork cut in bits, three carrots cut in slices, eight small onions, four cloves, two bay-leaves, two cloves of garlic, a piece of nutmeg, four sprigs of parsley, two of thyme, a dozen

stalks of chives, six pepper-corns, the fourth part of an ox-foot cut in four pieces, salt, pepper, about two ounces of ham cut in bits, then three pounds of double tripe on the whole; spread two ounces of fat bacon cut in thin slices over the top; wet slightly with half white wine and half water, or water only if you choose; put the cover on, and if not air-tight, put some paste around; set in a slow oven for six hours, then take the tripe out, strain the sauce, skim off the fat when cool; then put the tripe and sauce again in the pan, warm well, and serve in crockery plates, or bowls placed in chafing-dishes, as it is necessary to keep it warm while eating. It is good with water only, but better with the wine.

BEE-KEEPING.—The apiary or place for keeping the bee-hives should be well-sheltered and with a southern, eastern, or south-eastern exposure so as to get the sunshine during the day; it should also be selected with reference to the natural food of bees and whether it is likely to be in sufficient abundance. Gardens, fruit-trees, or flowers, should be in the vicinity; and there should be no large surfaces of water near, lest the bees, overcome by cold or fatigue, should be compelled to alight on them, or be driven down by the wind. Foul smells are annoying to bees, and therefore they should never be placed near barn-yards, stables, pig-styes or the like. The hives should be placed in a row on a raised platform elevated a few inches or a foot above the earth, and should be not less than two feet apart. It is considered best to have a separate platform for each hive, in order to prevent bees wandering into other hives than their own; and each hive should be painted in a different color so as to help the bees in identifying them. When the hives have been once located they should not be removed more than a few feet; for the bees when first flying forth mark all the surrounding objects as guides for their return, and if any serious change is made they lose their way and fly off. There are many kinds of bee-hives, some held under patents and very ingeniously contrived, but those most commonly used are simply tall square boxes, placed on a platform so as to leave a small shelf in front. The *chamber hive* is made with two compartments,—the lower for the residence of the bees, the upper to hold the boxes in which the bees deposit their honey after having filled the lower part. It is sometimes made larger at the top than at the bottom to keep the honeycomb from slipping down; and it is also furnished with inclined bottom boards to roll out the worms that fall upon them. The *dividing hives* are made with several apartments so as to enable the bee-keeper to multiply the number of colonies without the trouble of swarming and hiving. The partitions are designed so as to separate the brood combs; a part of the bees are divided off and placed by themselves to go

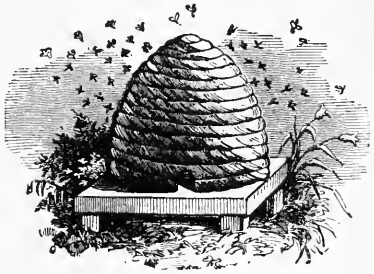


Chamber Hive.



Dividing Hives.

on making honey and multiplying in every respect like a natural swarm. In practice, however, this is not found always to work, as occasionally in one apartment there will be no brood from which to raise a queen. *Swarming hives* are sometimes used; they are made in sections, so that by closing all or a part of them the space which the bees occupy is lessened, they are crowded out, and their swarming hastened. Now, swarmers are so arranged as to allow the bees to go on accumulating honey and increasing in number, and in theory not swarm at all. A hive of bees is put into a bee house and empty hives connected with it so that as one becomes filled the bees may pass on to the adjoining one. Ordinary *straw hives* are best of all, however, on account



Straw Hive.

of the protection they afford against the heat of summer and the cold of winter. *Bees require a warm temperature.* They appear to have the faculty of perceiving the approach of cold weather or rain, and are seldom caught in a shower unless at a great distance from home. Cold is their great enemy, and in this climate the hives must be kept well sheltered and warm during the winter. In order to protect the ordinary hives, cover them with a thatch of straw or heavy cloth about the end of October, or earlier if the season be inclement. This is very essential, and well-covered hives are always in a better condition the following spring than such as have not been covered. As the frost comes on, the aperture at which the bees enter should be narrowed so as to admit the passage of only one bee at a time. A very little air will suffice for them in winter, when

they are mostly in a semi-torpid state; and it were better for them, during severe weather, if the hive were entirely under cover, as many are lost from being enticed to quit the hive by the sunshine of a clear day. The dead bees and other dirt, which the living at this season are not able to move for themselves, should be removed with a crooked wire. Great care must be taken not to let snow or ice close up entirely the apertures of the hives, as in that case the bees will inevitably be smothered.

The feeding of bees in winter is an important branch of bee-keeping. To the hives whose stock of honey is sufficient for supplying it, no further attention need be given till the breeding season arrives; this, in warm locations, will come about the end of May, and in those which are cold, a month later. The young bees, for a short time before they leave their cells and for sometime after, require to be fed regularly; and if the honey in the hive be exhausted, and the weather such that the bees cannot go forth to collect food, they kill and throw out some of their larvæ. To prevent such accidents it is advisable if it should rain for two successive days to feed all the bees indiscriminately during the breeding season. The way to decide whether the bees will need feeding is to examine the hives about the beginning of October, and if a large hive does not weigh thirty pounds, it will be necessary to allow them half a pound of honey or the same quantity of sugar made into syrup, every day until the required amount is stored. Brown sugar dissolved in water, and boiled to evaporate the water, is a good food for bees. The syrup should be boiled until it begins to be brittle when cooled. This or common sugar candy may be fed to the bees, in the hives or under them; if fed to them in the liquid state it may be introduced into the hives in shallow dishes, a couple of small sticks being laid across the surface to enable the bees to eat without getting into it.

The worst foe that the bee-keeper has to contend with is the bee moth, which remains in hiding during the day and may often be found around the hive, but hovers about during the evening trying to enter the hive and deposit its eggs. The best safeguard against this pest is to have the hive well-jointed and painted, the entrances not too large, the bees numerous and vigorous, and to examine the hive daily from the beginning of May until September or October. Many moths may be destroyed by catching them in shallow dishes containing sweetened water and a little vinegar. Hollow sticks, and similar things are often placed on the bottom board, where the worms hatched from the eggs may take refuge and be destroyed. These caterpillars at first are not thicker than a thread and are of a yellowish white color with a few brownish specks. They live in the wax, eating it, and fill the comb with webs, protecting themselves from the bees, meanwhile, by a silken sack which they spin and in which they lodge. It is necessary to look often under the bottom of the hive, and under the blocks or shells on which it rests.

The honey may be taken from the "chamber" or "dividing" hives almost without molesting the bees; but from the ordinary hives it is taken generally by suffocating the bees with sulphur, chloroform, or tobacco smoke. When sulphur is used, smear linen rags with melted sulphur, place a few pieces under the hive, and burn them slowly. In a few minutes the bees will fall to the floor of the hive, where they may be removed and buried to prevent resuscitation. The combs, being thus cleared of bees, may be cut out at leisure. When the preservation of the bee is desired, the following method of obtaining the honey is a good one: Having ascertained the weight of the hive and determined on the amount of honey to be taken out, begin the operation as soon as it is dark by inverting the full hive and placing over it one of exactly the same size. A sheet must be tied round the whole to prevent the bees from molesting the operator. The hives being thus arranged, beat the sides of the lower hive gently with a stick; the bees will then ascend into the upper hive, which may be known by a loud humming noise inside. The bees may also be driven up by smoking slightly with burning paper. When all the bees have ascended, the upper hive may be placed upon the pedestal from which the full hive was removed, when the latter is taken into the house and the honey extracted. Particular care must be taken to cut only one comb at a time, and not to take too much. When a sufficient quantity has been obtained, the hive must be placed over the one containing the bees, which must be reversed, and both left in that position till morning; it will then be found that the bees have taken possession of their former hive, and if the season prove favorable they will be able to make a sufficient quantity of comb and honey to replace that which was lost. If the honey is taken early in the season, immediately after the first swarming, the whole of it may be cut out, and the bees will probably make enough honey for their winter store; but in this case the hive cannot be expected to be full of honey, because the bees, in June and July, are chiefly occupied in breeding; and thus one if not two swarms are lost.

BEER.—Properly speaking beer includes all the liquors made from malted grain, and it is so applied in England; but in this country the name "ale" is given to the heavier spirituous kinds, and by beer is meant only the light fermented beverages, and decoctions from various roots. These are very numerous, and they are made differently in different parts of the country; but the following recipes may be recommended :—

Dandelion Beer.—*Take :*—Water, 2 galls; dandelions, 1 peck; molasses, 1 quart; yeast, 1 pint.

Put two gallons of water into a pot, and add a peck of dandelions; boil them about 2 hours; strain it into a jug or keg, and add 1 quart of

molasses and a pint of good yeast. Set it to ferment twelve hours; then bottle it and tie down the cork, and it is ready for use.

Ginger Beer.—(I.) *Take:*–Water, 9 galls; sugar, 10 lbs; ginger-root, 11 oz; lemon-juice, 9 oz; honey, ½ lb; yeast, 3 pints; egg, white of, 1; essence of lemon, ½ oz.

Take nine gallons of water, ten pounds of brown or white sugar, eleven ounces of bruised ginger-root, nine ounces of lemon-juice, half a pound of honey, and three pints of yeast; boil the ginger half an hour in a gallon of the water, then add the rest of the water and the other ingredients, and set it aside. When cold, strain it and add the white of one egg beaten, and half an ounce of essence of lemon. Let it stand four days, then bottle, and it will keep many months.

(II.) *Take:*–Water, 1 gall; ginger, 2 oz; molasses, 1 pt; yeast, ½ pt.

(III.) (Simpler).—Take one gallon of warm water, two ounces of ginger, one pint of molasses, and half a pint of good yeast. Put this into a stone jug; shake it up well; set it to rise for twelve hours; then cork it tight, or bottle, and it is ready for use.

Lager. (*See* LAGER BEER.)

Quick Beer.

Take fourteen pounds of molasses and six ounces of hops, and boil them two hours in eleven gallons of water; when cooked sufficiently, add one pint of good yeast. Let it work in a tub covered up for sixteen hours; when the working is over, put it into a cask, and let it work there three or four days; then bung it down, or pour it from the cask and bottle it. The beer will be fit to drink in a week, and will be as strong as porter. If a weaker beer for table use is desired, use more water in proportion to the other ingredients.

Sassafras Beer.—*Take:*–Boiling water, 2 qts; cream-tartar, 2 tablespoonfuls; oil of sassafras 10 drops; oil of wintergreen, 10 drops; oil of spruce, 10 drops; cold water, 8 qts; yeast, 1 pt; sugar.

Pour two quarts of boiling water upon two large spoonfuls of cream-tartar, and add ten drops of oil of sassafras, ten drops of oil of spruce, ten drops of oil of wintergreen; then add eight quarts of cold water and a pint of good yeast, and sweeten to taste. Let it stand twenty-four hours and then bottle it. This makes a delicious summer beverage.

Spruce Beer. — *Take:* – Boiling water, 18 gals; molasses or sugar, 12 lbs; essence of spruce, 14 oz; yeast, 1 pt.

A very wholesome effervescing beer made of molasses and the extract of the spruce fir.

Brown Spruce beer is made thus: add to eighteen gallons of boiling water twelve pounds of molasses and fourteen ounces of spruce. Let the mixture cool, and when lukewarm, add one pint of yeast and set aside to ferment; in warm weather less yeast will suffice. While the fermentation is going on remove the yeast by skimming, and when the fermentation becomes languid, which usually happens in two days, put the beer into stone bottles and tie the corks down with pack thread. *White Spruce beer* is made in the same way, except that white or brown sugar is used instead of molasses, and it has a very superior flavor. Spruce beer will counteract any tendency to the scurvy.

Sugar Beer.—*Take:*–Hops, 1½ lbs; boiling water, 11 galls; sugar, 14 lbs; yeast, 1 pt.

Procure a ten-gallon cask, fit its head in, put a cock into the side one inch above the bottom, then make a hole in the top and stop it with a cork. Put a pound and a half of hops into any convenient vessel and pour over them eleven gallons of boiling water (if you have a large enough pot it is best to boil the hops and water five minutes); strain off the liquor and add to it fourteen pounds of sugar; mix one pint of good yeast with this, and pour the whole into the cask through the hole in the top. It will soon ferment, and the yeast will appear through the hole in the head; as this works out let it fall back again into the cask. In summer it will require about three weeks to complete the fermentation, and as this slackens towards the latter part, the cork should be kept in the hole most of the time to prevent the access of too much air; but the cork should be removed now and then to let the fixed air inside escape. When the fermentation has stopped, and the sweet taste of the sugar is barely perceptible, drive the cork in tight, and in four days the beer will be fit for draught or for bottling. Care must be taken to ferment sufficiently, but not so long that the liquor becomes flat, as then it soon sours. White sugar makes beer of the purest flavor and palest color, but brown will answer.

BEET.—The common beet is grown in several varieties for table use, differing from each other in size, shape, color, and sweetness. The large red kind is called the blood-beet, and is much cultivated, but the "small red" and the "long yellow" are the sweetest and most delicate and have the richest color when served. Beets must be grown in a rich, light, sandy soil which they can penetrate easily. Plant as soon as the frost is out of the ground in rows eighteen inches apart; they can be obtained earlier in the season by raising the seeds in a hot bed till they are four or five inches high and then transplanting them to the garden.

Mangel-Wurzel is a very large and coarse variety of the beet which is extremely prolific and easily cultivated, and makes excellent food for cattle and especially for milch cows. The *sea beet* is a perennial and one of the most valuable plants known for greens. It thrives in gardens without any care at all, and is grown from seeds which it produces in great abundance. The season for beets begins about June 1st and continues throughout the year.

Boiled Beets.—Set in a pan, cover them with cold water, place over a good fire and boil till tender. They will require one hour in summer and three in winter. Beets must not

be bruised or have the skin broken before being cooked, or they will lose their color and most of their good qualities. A little salt added to the water improves them. When done, rub off the skin, and split them lengthwise if young, or slice them round if large; butter well in the dish, and season to taste with salt and pepper. Hot beets are not very healthy if eaten in any considerable quantity; they may be sliced when cold, and served in vinegar.

Pickled (or Canned) Beets.—Boil as above; when done put them in jars and cover them with very salt water. When cool, put the jars in a boiler full of cold water; set on the fire and boil from twenty to thirty minutes, then seal them immediately; set the jars away in a dark, cool closet, and use as required.

Salad (Beet).—Boil in the usual way; when cold, peel and slice them; serve in vinegar, salt and pepper, and a little oil.

Stewed Beets.—Boil young sweet beets till nearly done; skin and slice them. Serve in a gravy made as follows: Put into a saucepan two tablespoonfuls of butter, two of vinegar, some salt and pepper, and add one shalot minced and a little parsley; set on the fire and let it simmer twenty minutes, shaking the saucepan occasionally.

BEGONIA.—A very pretty plant for house gardening. The two best species are *B. incarnata* and *fuchsoidia.* The former is an evergreen shrub, with thick stems, and large, drooping clusters of pink flowers in winter; it shows to great advantage if well cared for, and is one of the best window plants. The latter is often called "coral drop," and resembles the former somewhat in appearance, but produces in all seasons its drooping coral flowers. Plant them in a compost made of equal quantities of loam and leaf mould, with a little sand mixed in. Put them in the warmest possible situation where they will get plenty of sun and light; but water seldom and sparingly.

BELLADONNA. — Poison — *Symptoms:* Delirium, drowsiness, feeble pulse, sometimes faintness and convulsions. *Antidotes:* Lime water, of which a half tumbler may be given at a time. An emetic is appropriate in cases in which the mistake is recognized soon after the poison has been swallowed.

Belladonna, even when given in medical doses, may produce alarming symptoms in individual cases, but these disappear spontaneously on discontinuing the remedy.

The name is given to the medicinal extract of the *atropa belladonna*, which is much used in practice, in moderate doses. It is prescribed in certain spasmodic nervous affections, such as epilepsy and chorea; for the relief of pain, either of the cutaneous or visceral nerves; for habitual constipation and incontinence of urine; to check certain secretions, and to prevent suppuration. As an anodyne it is inferior to opium; and the claims made in its behalf as a preventative of scarlet fever are not proven. One of the most striking effects of a sufficient dose of belladonna is the dilation of the pupil of the eye; it also produces a peculiar dryness of the tongue and throat and marked quickening of the pulse-beats.

BENZINE.—A colorless liquid, lighter than petroleum, and obtained from that oil in process of refinement. It is sometimes used as a burning fluid, but is extremely dangerous; also as a substitute for turpentine in mixing paints, but its chief value in the household comes from its power of dissolving fats, wax and paraffine; every kind of grease spot on clothes may be removed by it. In using, saturate a woolen rag and rub over the spot, renewing several times. Benzine must never be used near a fire or light of any kind; for it is so inflammable as to take fire at a considerable distance. Keep it in a dark, cool place.

BEVERAGES.—Besides wines and malt liquors, there are various beverages in more or less general use. Several of these are described under Beer, and others, such as lemonade, orangeade, orgeat, and sherbet, are given in their proper places; but there are others still, which cannot be classified and which therefore it will be most appropriate to group together here.

Eau Sucré.—Sugar and water, a beverage made by dissolving enough sugar in water to sweeten; it is much used in France, and is considered very wholesome and refreshing. It is customary to drink it just before bedtime.

Lait Sucré.—*Take:*—Milk, sugar, and lemon. Milk well boiled with sugar and flavored with lemon. It should be drunk cold.

Summer Beverage.—*Take:*—Ale, or porter, 1 bottle; water, 10 qts; brown sugar, 1 lb; ground ginger, 2 oz.

I. An agreeable and cooling beverage for hot weather may be made by mixing a bottle of ale or porter with ten quarts of water, adding a pound of coarse brown sugar and two ounces of ground ginger. Bottle and cork tightly and set away for a few days. This is not exactly ginger beer, but if set on ice it is a cooling and pleasantly acid drink.

II. *Another cooling beverage* may be made by mixing half an ounce of *cream of tartar* in a quart of boiling water, and adding sugar and a bit of lemon peel. Strain when cold, and set away till wanted.

III. *Still another excellent* summer drink may be made by bruising any fruit, such as cherries, currants, strawberries, raspberries, and the like, and adding water and sugar to taste; strain it after standing half an hour, and keep it in a cool place. By dissolving fruit jelly in water and letting it cool, a delicious beverage may be secured.

Whey (acidulous).—*Take:*—Milk, 1 cupful; citric acid or lemon juice, a few drops. A pleasant and wholesome beverage is made by adding to a cupful of milk a little solution of citric acid, or lemon juice, which will curdle the milk. Care must be taken not to add too much of the juice: an experiment or two will show the necessary quantity.

Beverages for the Sick.—1. Tamarinds soaked

in hot water and sweetened to taste make an admirable beverage for invalids. To be drunk cold. 2. *Nitre Whey.* This is sometimes given to the sick to promote perspiration. To make: dilute half a pint of new milk with an equal quantity of hot water; boil together, and while boiling, pour in a dessertspoonful of the sweet spirits of nitre. Sweeten it and let the patient take it as warm as it can be drunk.

BILBERRIES.—A small purplish red fruit somewhat similar to whortleberries, but generally smaller. They grow upon a good-sized tree, are very abundant in various parts of the country, and usually ripen about the latter part of August or first of September. Whortleberries of the smaller kinds are sometimes sold as *bilberries*, but they differ in flavor, the latter being much more acid.

BILIOUS FEVER.—A term applied to remittent fever, a disease due to malarial poisonings.

Symptoms—Resemble those of intermittent fever, except that there is no cessation of fever, but simply an abatement, or diminution. Length of remission varies from 6 to 12 hours. The remission usually occurs in the morning. Disease may last fourteen or fifteen days, and end in an attack of sweating, or it may merge into low fever.

Treatment.—Diminish the fever by giving cold drinks, sponging the body with cool water, mildly acting upon the bowels with cream of tartar water. During the remission give ten grains of quinine, and let the patient have nourishing broths, raw eggs, and stimulants if much depressed. To complete the cure the directions given for patients convalescent from intermittent fever, will be found appropriate. After this fever, proper care should be taken to prevent a relapse. For this purpose the patient should continue to take the Peruvian bark for some time after he is well. He should also confine himself to a simple diet, avoiding confections, trashy fruits, and all kinds of flatulent food. The treatment of remittent fever should always be confided to a physician.

BILL.—This term is usually applied to what is legally called an account. It is a statement in writing of the items of goods sold to, or work done for, another person.

It may be in the following form:

NEW YORK, May 9, 1876.

Mr. JOHN DOE,

1876. To RICHARD ROE, Dr.

April 1,	To binding 3 vols. in cloth, at 75c.	$2 25
April 15,	To 2 packages of letter paper, at $2 $\frac{00}{100}$	4 00
		$6 25

An account like the foregoing, rendered to a debtor, is usually termed a bill.

An open account is an account detailing the transactions between persons having mutual dealings, of which the balance has not been struck, or an account which has not been accepted by both parties.

A stated account is an account which has been accepted by both parties. Acceptance by the debtor need not be expressed in words. If an account is not objected to within a reasonable time after it is received, it is presumed in many cases that it has been accepted. (*See* RECEIPT and LAW.)

BILL OF EXCHANGE.—A bill of exchange, or draft, as it is often called, is defined to be a written order, or request, by one person to another, for the payment of money, at a specified time, absolutely, and at all events. The person who draws the bill is called the drawer. The person to whom it is addressed is called the drawee, and, after he has accepted it, the acceptor. The person to whom, or to whose order the bill is made payable is called the payee. When payable to the order of the payee, it is transferred by endorsement and delivery, in the same manner as a promissory note, payable to order (*see* PROMISSORY NOTE,) and the payee thereupon becomes the endorser, and the person to whom it is transferred, the endorsee, or holder.

The following is a common form:

$1000.$\frac{00}{100}$. NEW YORK, May 1, 1876.

"Thirty days after sight pay to the order of John Doe, the sum of one thousand dollars, for value received, and charge the same to the account of RICHARD ROE.

To MESSRS. SMITH BROTHERS,
" St. Louis, Missouri.

Here Richard Roe is the drawer and Smith Brothers the drawees, and, after they have accepted it by writing the word "accepted," and their signature across the face of the bill, with the date, the acceptors. John Doe is the payee, and, after endorsement, the endorser. So many days after sight means so many days after acceptance.

When the bill is payable at sight, or a certain number of days after sight, as in the form given, it must be presented to the drawer for his acceptance without unreasonable delay, otherwise, in case of non-acceptance, the remedy against the drawer and endorser may be lost. When payable at a certain period after date, it need not be presented by the holder for acceptance until then, although it is advisable to present it without delay, as thereby, if accepted, the additional security of the acceptor is obtained, and, if not accepted, the drawer and endorsers become liable immediately. When the drawee refuses to accept the bill, it should be protested (*see Protest*, under LAW) for non-acceptance, and notice thereof given to the drawer and endorsers, in the same manner as in case of non-payment of a promissory note. (*Which see.*) Bills payable at sight, or a certain time after date, or after sight, are entitled to days of grace, but in nearly all of the States, bills payable on demand are not.

Bills of exchange are governed by the same rules, with regard to negotiability, transfer, endorsement, presentment, and notice of non-payment, as promissory notes. (*See* PROMISSORY NOTE.)

BILL OF FARE. (*See* BREAKFAST, LUNCH, DINNER, SUPPER, AND TEA.)

☞ Bills of fare are annexed for each season, showing articles in market in New York. The New York market represents a fair average for the most thickly populated parts of the country. Readers elsewhere will, of course, have to allow for local differences. The articles in each group are in alphabetical order.

I. SPRING.

March, April, May.

Shell Fish.

Clams, hard crabs, lobster, mussels, oysters, prawns, scallops, shrimps, terrapins, turtle.

Fish.

Bass (black, striped and sea), blue fish, cod, eels, haddock, halibut, herrings, mackerel, muscalonge, pickerel, pompan, prawns, salmon, shad (North River), sheepshead, shrimps, skate, smelts, soles, turbot, trout (brook, lake and salmon. (May to July).

Meat.

Beef, lamb, mutton sweetbreads, veal.

Poultry.

Capons, chickens, ducks, geese and turkeys.

Game.

Ducks and geese until May 1st, pigeons, plover, snipe, squabs, after April.

Vegetables.

Asparagus, Jerusalem artichokes, lettuce, potatoes (sweet and white), radishes, spinach, sprouts, watercresses, and all the vegetables of the Winter list.

Fruit.

The Winter list, with the addition of pie plant, pineapple, strawberries.

Nuts.

The Winter list, with the addition of Brazil nuts.

II. SUMMER.

June, July, August.

Shell Fish.

Clams, soft crabs, lobster, turtle in August.

Fish.

Bass (black and sea), blue fish, eels, flounders, haddock, herring, mackerel, muscalonge, salmon, sheepshead, turbot, trout (brook, lake and salmon).

Meat.

Beef, lamb, mutton, veal.

Poultry.

Chickens, ducks.

Game.

Snipe, woodcock after July 3.

Vegetables.

String beans, beets, cabbage, cauliflower, carrots, corn, cucumbers, egg plant, lettuce, macaroni, okra, onions, green peas, potatoes, rice, radishes, summer squash, tomatoes, turnips.

Fruits.

Apples, apricots, cherries, currants, gooseberries, grapes, lemons, oranges, peaches, pears, pineapples, raspberries, strawberries, imported dried fruits.

III. AUTUMN.

September, October, November.

Shell Fish.

Clams, soft crabs, lobster, mussels, oysters, scallops, turtle, terrapin.

Fish.

Black bass, blue fish, flounders, mackerel, muscalonge, perch, pickerel, pike, salmon, sheepshead, skates, smelts, soles, sturgeon, trout (brook, lake and salmon), white fish.

Meat.

Beef, lamb, mutton.

Poultry.

Capons, chickens, ducks, geese, turkeys.

Game.

Brant, duck, goose Sep. to May, prairie chicken, ruff grouse Sep. to Jan., venison until Feb., quail and rabbits Oct. 1 to Jan. 1, snipe, woodcock July 3 to Feb. 1.

Vegetables.

Artichokes, beans, (Lima and other shell-beans) beets, broccoli, cabbage, cauliflower, carrots, celery, corn, cucumbers, egg-plant, lettuce, macaroni, okra, onions, potatoes (white and sweet), rice, squash, tomatoes, turnips.

Fruits.

Apples, bananas, blackberries, dates, figs, grapes, lemons, oranges, peaches, pears, plums, prunes, quinces, raisins.

Nuts.

Black walnuts, chestnuts, hazel nuts, shell barks.

IV. WINTER.

December, January, February.

Shell Fish.

Clams, mussels, oysters, scallops, terrapins, turtle.

Fish.

Bass (black and striped), blue fish, cod, eels, flounders, haddock, muscalonge, perch, pickerel, pike, salmon, skate, smelts, sturgeon, white fish.

Meat.

Beef, mutton, pork.

Poultry.

Capons, chickens, ducks, geese, turkeys.

Game.

Brant until May, duck, wild, until May, and wood duck until Jan., geese until May, prairie chicken, ruff grouse, snipe, venison until Feb., quail, rabbits until Dec., woodcock until Feb.

Vegetables.

Artichokes, beets, dried beans, broccoli, cabbage, carrots, celery, macaroni, onions, parsnips, potatoes (sweet and white), rice, salsify, turnips, winter squash, all canned fruit.

Fruit.

Apples, bananas, cranberries, dates, figs, ginger, lemons, oranges, pears, prunes, raisins. All kinds of canned fruits, and compotes of dried fruits.

Nuts.

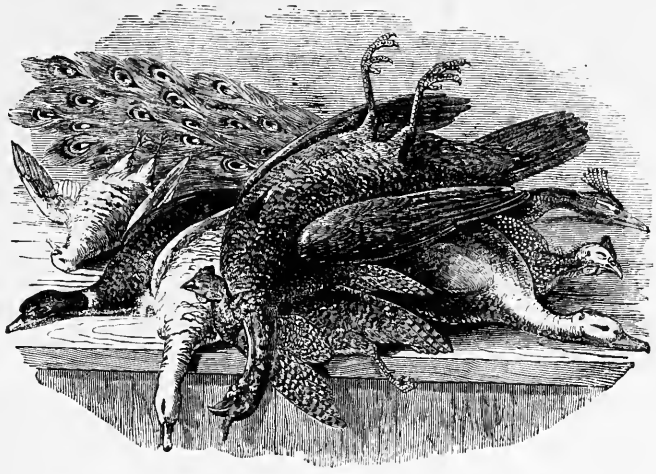
Almonds, black walnuts, butternuts, cocoanuts, English walnuts, filberts, pecan nuts, shell barks.

BIRD-CAGE.—The smaller bird-cages, such for instance as are used for canary birds, are usually made entirely of wire; those of larger sizes, for mocking-birds, parrots, and the like, are made partly of wire and partly of wood. They should be kept scrupulously clean, neglect on this point occasioning the loss of many pet birds and the injury of others; and in order to ensure this, they should be washed every day, and dipped occasionally in lime-water. Whatever the bird that is kept in confinement, the bottom of the cage should always be covered with clean gravel and sand, and they should be put in fresh every few days. Sand not only affords a more natural and pleasant footing for the birds, but they also obtain from it certain substances which they seem to use medicinally, and without which it is impossible for them to remain healthy in confinement for any length of time. Most cages are now made with removable bottoms, which greatly facilitates the cleaning of them and the introduction of food. When the paint begins to wear off a wire cage, it should at once be repainted, or it will soon rust away.

BIRDS.—The flesh of birds differs from that of most four-footed animals, chiefly in the relative quantity of fat and in the quality of the juices. The fat of birds is generally found by itself, just under the skin, and in various parts of the interior of the body; and as it has a flavor which is not agreeable, it enters but little into the food of man. The juices are deficient in red blood, and have a more delicate flavor than that of adult animals, but do not differ greatly from those of young animals. The flesh of fowls differs little in structure from that of animals, and is quite as

rich in nitrogenous or flesh-forming elements, but is relatively poorer in fat and salts. It is regarded as a light food, better fitted for invalids than strong men, or as an adjunct to other kinds of flesh; but this is due rather to its delicacy or absence of flavor, which leads man to prefer beef or mutton as a permanent diet, than to any real deficiency of nutriment as a food. It is in reality one of the most nutritious of foods, and could enter with advantage more largely into the family diet.

The flesh of all birds is sufficiently similar to en-



able us to distinguish it readily from other kinds of meat; but there are also very appreciable differences according to the nature of the bird, its breed and feeding. The flesh of the domestic fowl differs very greatly, both in fulness and delicacy of flavor, in different specimens; and the flesh of a graminivorous is easily distinguished from that of a carnivorous bird. The flesh of the former is always wholesome and agreeable, while that of the latter is almost invariably rank and disagreeable. The flavor of wild birds is fuller and stronger than that of the domesticated bird, and the flesh is richer in nitrogenous and generally poorer in fat-producing matter. The structure is also closer and firmer, so that in the fresh state it is regarded as hard and tough; and it is desirable, and sometimes necessary, to allow decomposition to commence, in order to cause a separation and softening of the fibres. While a domestic fowl, therefore, is usually eaten quite fresh, a wild fowl is kept for many days or even weeks, before it is cooked. The flesh of the male bird, whether domesticated or wild, generally has a fuller flavor than that of the female; and the capon retains some of the strength of flavor of the male bird with much of the delicacy of the female. (*See* POULTRY. For Pet Birds see their names.)

BIRTH. (*See* INFANT.)

BISCUITS.—In making biscuit great care must be taken to get the exact proportions of the several ingredients,—too much or too little of soda or of lard inevitably spoils them. The flour used should be the best and at least *three months* old; it is almost impossible to make light biscuits with new flour. The flour should always be sifted. The oven too should be carefully looked after, for upon its being of the right temperature will depend much of the success of the baking.

Flavored Biscuit.—Make biscuits as in directions for French, Hard, or Soda, and flavor with any kind of essence, or with orange or lemon peel grated.

French Biscuit.—*Take:*–Flour, 6 lbs; butter, 6 oz; milk, 1 ½ pts; sugar, 1 ½ teaspoonfuls; eggs, 6; yeast, ¼ gill of distillery or ½ pt. of home brewed.

Take six pounds of flour; six ounces of butter; a pint and a half of new milk; a cup and a half of sugar; six eggs and ¼ gill of brewers or ½ pt. home brewed yeast. Melt the butter in the milk; beat the eggs and add them. Then add all the other ingredients, mix thoroughly, set it to rise, and when very light mould into small biscuits, and bake till brown in a quick oven.

Graham Biscuits.—*Take:*–Graham flour, 3 cupfuls; white flour, 1 cupful; milk, 1 ½ cupfuls; lard, 2 tablespoonfuls; sugar, 1 tablespoonful; soda, 1 teaspoonful; cream-tartar, 2 teaspoonfuls; salt, ½ teaspoonful.

Take three cups of Graham flour; one cup of white flour; one and a half cupfuls of milk; two tablespoonfuls lard; one tablespoonful of white sugar; one teaspoonful soda; two teaspoonfuls cream-tartar; half a teaspoonful of salt. Rub the soda and cream-tartar into the flour and sift all together before they are wet; then add the salt and sugar; next the lard, rubbed rapidly and lightly into the prepared flour; and lastly pour in the milk. Knead the dough rapidly and with as few strokes as

possible, since handling injures the biscuits. The dough should be very soft; if the flour stiffens it too much add more milk. Roll out lightly, cut into cakes at least half an inch thick, and bake in a quick oven. These are good cold as well as hot.

Hard or Plain Biscuits.—*Take:*–Flour, 1 qt; butter, 4 tablespoonfuls; salt, ½ teaspoonful.

Take one quart of flour; rub four tablespoonfuls of butter into two-thirds of the flour; adding half a teaspoonful of salt; wet this latter with sweet milk till a dough is formed; roll it out repeatedly, sprinkling on the reserved flour till all is used. Cut into round cakes, half an inch thick, and bake in a quick oven.

Potato Biscuit.—*Take:*–Potatoes, 10; milk 2 cupfuls; white sugar, 2 tablespoonfuls; ½ cupful home-made yeast; melted butter, 4 tablespoonfuls; flour; salt.

Take ten potatoes pared, boiled soft, and mashed fine; add two cupfuls of lukewarm milk; two tablespoonfuls of white sugar; half a cup of yeast; and enough flour to make a thin batter. Stir together and set it to rise till light,—four or five hours; then add four tablespoonfuls of melted butter, a little salt, and enough flour to make a soft dough. Let this rise four hours longer, roll out in a sheet about an inch thick, and cut into cakes; set to rise one hour and bake in a moderately quick oven.

Risen Biscuit.—*Take:*–Milk, 3 pts; butter or lard, 1 teacupful; home-made yeast, 1 teacupful; white sugar, 2 tablespoonfuls; salt, 1 teaspoonful. Flour.

Take three pints of warm milk; one level cupful of lard or butter melted; one cupful of yeast; two heaping tablespoonfuls of white sugar, one teaspoonful of salt. Flour. Mix over night, and set to rise; in the morning roll it out into a sheet three quarters of an inch thick, cut into round cakes, set these closely together in a baking-pan, let them rise twenty minutes, and bake in a quick oven till brown.

Short Biscuit.—*Take:*–Flour, 1 qt; butter, ¼ lb; milk; water.

Take one quart of flour; a quarter of a pound of butter, melted in a little boiling water; add cold milk enough to make a stiff dough; work into small biscuits, and bake them in a quick oven.

Soda Biscuit.—*Take:*–Flour, 3 pts; milk, 1 pt; lard, 2 tablespoonfuls; soda, 1 teaspoonful; cream-tartar, 2 teaspoonfuls; salt, ½ teaspoonful.

Take three pints of flour; one pint of sweet milk; two tablespoonfuls of lard; one teaspoonful of soda; two teaspoonfuls of cream-tartar; half teaspoonful of salt. Mix and bake as directed for Graham biscuit. These are light and delicious. Serve hot.

Sour-Milk Biscuit.—*Take:*–Flour, 1 qt; sour milk, 1 pt; soda, 1 teaspoonful.

Take one quart of flour; one pint of sour milk; one teaspoonful of soda mixed with the milk until it froths. Stir it into the flour cold, mix it quickly, and bake twenty minutes in a hot oven.

Yorkshire Risen Biscuits.—*Take:*–Milk, 1 qt; flour, enough to make batter; home-made yeast, 1 teacupful; salt, ½ teaspoonful; soda, ½ teaspoonfuls; eggs, 2; butter, 1 tablespoonful.

Make a batter with flour and one quart of milk boiling hot; when milk warm, add one teacupful of yeast, and half teaspoonful of salt. Set it in a moderately warm place and let it rise till very light; then stir in a good half teaspoonful of soda, two eggs, and a tablespoonful of melted butter. Add flour enough to make a dough stiff enough to mould; make it into small round cakes, let it rise fifteen minutes, and bake in a slow oven.

BISON. (*See* BUFFALO.)

BITTERS.—Formerly it was supposed that there was one peculiar principle common to all bitter plants; but chemists are now of opinion that there are various bitter principles having different properties, and that the bitter taste proceeds from principles varying perhaps in each plant. The bitter is intense in quassia and Peruvian bark; scarcely less so in hops, gentian, and broom; and it is found in various degrees of strength in coffee, in squills, and in the bark of many of our trees. Many varieties of the bitter principle are deadly poisons, as *strychnia*, the bitter of Nux Vomica; the *Morphia* of opium; and the *Nicotin* of tobacco. Bitters are used in medicine as tonics chiefly, and sometimes as aperients. Various kinds of "Bitters" are used in this country to stimulate the appetite, being usually taken with sherry-wine. They are used in the preparation of the peculiar American drinks called "cock-tails." Bitters in the American market are generally patented and made from secret formulæ. They are alcoholic liquids, flavored with Angostura bark, orange peel, Angelica roots and seeds, or similar articles. Those most in use are the "Stoughton" and "Angostura."

BITUMINOUS COAL.—A kind of coal containing bitumen or pitch, and burning with much flame and smoke. It is much used in manufacturing processes, and is the material from which illuminating gas is distilled. Good bituminous coal burns freely and pleasantly in an open fire, with a cheerful, bright flame, producing carbonic acid in large quantity, a small proportion of sulphurous vapor, and other ordinary constituents of smoke. It is more healthy for household use than anthracite, inasmuch as it promotes ventilation better by free burning, and does not throw off the deadly carbonic oxide gas with which anthracite poisons the air. The one great objection to bituminous coal is that it is dirty and smoky; but this can be obviated by a properly constructed heating apparatus. It is the kind of fuel that is in almost universal use in England and other European countries, and also in the Western States. It is less expensive than anthracite, but a good quality cannot always be procured where anthracite has the market.

BLACKBERRIES.—This useful and delicious fruit grows wild in great abundance throughout the country, but of late several

varieties have begun to be regularly cultivated in the garden. The choicest of these are the *Lawton*, *Kittatinny*, *Wilson's early*, and *Dorchester*. The Wilson's Early ripens ten days to two weeks earlier than any other variety; the Dorchester follows closely after it, and is a much sweeter and finer-flavored fruit; but the Lawton is the largest and best that cultivation has yet produced. The wild varieties are much smaller than these, have more seeds, and not nearly so rich a flavor; yet even they make excellent jam, jelly, puddings and the like. Blackberries begin to ripen about the 10th of July and last till the 1st of September; they are at their best, however, from about the middle of July to the middle of August. Eaten at this time, cold, with sugar and cream, they are only inferior to strawberries in flavor, and quite as wholesome. (*See* COMPOTES, JAM, JELLY, PIES and PUDDINGS.)

To Dry.—Dry carefully in the sun, like apples, and keep in a cool, dry place. This is a cheaper way than any other of preserving them, and they make excellent pies.

Blackberry Cordial.—Put the berries in a kettle over the fire, with a very small quantity of water in the bottom of the kettle; let them boil soft. Strain them through a bag, pressing them hard, until the juice is all separated from the seed. Put the juice on the fire again, and sweeten to the taste with white sugar; throw in a little bag of stick cinnamon. Let it boil half an hour; take it off, and stir in enough brandy or whiskey to make it of the desired strength. Bottle when cold and seal with wax.

Blackberry Jam.—To each pound of berries allow a pound of sugar. Mix them well together and let them stand half an hour; then boil slowly, mashing them and stirring frequently. When they have boiled half an hour, take a little of the syrup up in a cup and set it in a dish of cold water; if it shows the consistency of stiff jelly, take the whole from the fire, if not, boil till it does.

Blackberry Jelly.—The following is strongly recommended by "Marion Harland:" Put the berries in a stone jar; set this in a kettle of tepid water, and put it upon the fire. Cover up tightly, and let it boil until the fruit is broken to pieces; strain, pressing the bag (a coarse, stout one) hard, putting in but a few handfuls at a time, and between each squeezing turning it inside out to scald off the pulp and skins. To each pint of juice allow a pint of sugar. Set the juice on alone to boil, and while it is warming divide the sugar into several different portions, and put into shallow pie-dishes or pans that will fit into your ovens; heat in these, opening the ovens now and then to stir it and prevent burning. Boil the juice exactly twenty minutes from the moment it begins fairly to boil. By this time the sugar will be so hot you cannot bear your hand in it. Should it melt around the edges do not be alarmed; the burned parts will only form into lumps in the liquid and can easily be taken out. Throw the sugar into the boiling juice, stirring rapidly all the while; it will *hiss* as it falls in and melt very quickly. Withdraw the spoon when you are sure the sugar is dissolved. Let the jelly just come to a boil, and take the kettle from the fire instantly. Roll your glasses or cups in hot water, and fill with the scalding liquor. The jelly will "form" at once. Set the cups in the sun, and as the contents shrink, fill up one from another. When fully settled, put brandied tissue-paper over the top of each glass, paste a thick paper over it, and keep in a dry place.

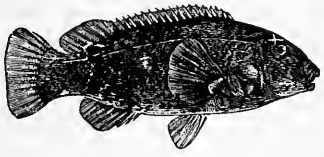
Blackberry (Stewed, Nantucket.)—Take good ripe blackberries and put them in a preserving kettle without water; heat slowly and stew until cooked. Allow a heaped spoonful of flour to every quart of fruit; mix a little sugar with it; stir it in and stew until it thickens. Pour into moulds and place on ice. This is a delicious dessert, with cream and sugar.

Blackberry Syrup.—*Take:*—Blackberry juice, 1 qt; loaf sugar, ½ lb; nutmegs, cinnamon, and allspice, ¼ oz each; cloves, 1 tablespoonful; brandy, ½ pint.

Take one quart of blackberry juice; half a pound of loaf sugar; quarter of an ounce each of nutmegs, cinnamon, and allspice; a tablespoonful of cloves. Pulverize the spice, and boil all for fifteen or twenty minutes. When cold, add half a pint of brandy. This is excellent for summer complaint and cholera.

Blackberry Vinegar.—Put the berries into a stone jar, and mash them thoroughly; add enough cider-vinegar to cover it well; stand in the sun all day and in the cellar all night, stirring well now and then; strain, and put as many berries in the jar as were in it before, pour the strained vinegar over them, mash, and set in the sun all day; strain a second time next day To each quart of this juice add *one pint* of water and mix; then to each three pints of this mixed juice, add *five and a half pounds* of white sugar. Place over the fire and stir until the sugar is dissolved. Let it come to a boil; remove the scum; and then take off and strain. Bottle while warm, and seal with wax.

BLACK FISH.—The name popularly given to *tautog*. It abounds all along the Atlantic coast from Long Island to Maine, and though somewhat dry in flavor, is a favorite for cooking. Some do not like it boiled, but it is one



of the best of fishes for baking. It is generally found alive in market, weighs from one to five pounds, and is in season from June to December. Those weighing about a pound are best for frying; and for baking those weighing three or four pounds are the choicest. For cooking, SEE BASS and BLUE FISH.

BLACKING. — Can generally be bought cheaper than it can be made at home. The following recipes, however, are excellent:

Harness (Blacking for).—*Take:*–Mutton suet, 2 oz; beeswax, 6 oz; sugar candy, 6 oz; soft soap, 2 oz; indigo, 1 oz; turpentine, 1 gill.

An excellent blacking for harness is made by melting two ounces of mutton suet with six ounces of beeswax; add six ounces of sugar candy, two ounces of soft soap dissolved in water, and one ounce of indigo finely powdered; when melted and well mixed, add to the whole a gill of turpentine. Apply with a sponge and polish with a dry brush.

Shoes (Blacking for).—*Take :*–Ivory black, 3 oz; molasses, 2 oz; sulphuric acid, 1 oz; gum arabic, 1 oz; sweet oil, 1 teaspoonful; vinegar, 1 pt.

Mix three ounces of ivory black; two ounces of molasses; one ounce of sulphuric acid; one ounce of gum arabic dissolved in a little water; a tablespoonful of sweet oil; and a pint of vinegar. Stir together thoroughly. This will be liquid blacking. It may be made into a paste by putting in only a little more than half a pint of vinegar.

Stoves (Blacking for).—*Take :*–Black lead, ½ lb; eggs, whites of 3; sour beer or porter.

Mix half a pound of black lead with the whites of three eggs, well beaten; then dilute to a thin paste by stirring in sour beer or porter. Apply with cloth or brush, and rub with dry brush.

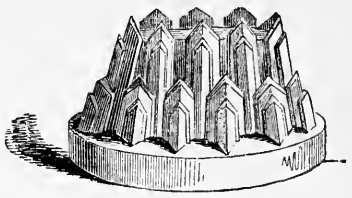
BLACK LEAD.—A familiar substance, much used for giving a black, shiny appearance to grates, fenders, stoves, and other articles of cast-iron furniture. Notwithstanding its name, it has no connection with metal *lead;* it is simply a mineral substance dug out of the earth in many parts of the world, in lumps, and reduced to powder for household use. There are several qualities of black lead, but the highest in price is the cheapest; the poorer kinds are much adulterated, and there is no known substance the addition of which does not impair the quality. The test is to observe the brightness of the polish it will give with least trouble.

BLACK PUDDING.—A kind of sausage very popular in Scotland, made of hogs' blood with groats and various kinds of herbs such as onions, shallots, thyme, sage, garlic, marjoram, and parsley, to which lumps of fat are added. The whole is inclosed in a piece of the intestine of the pig and boiled, but it is usual before eating it, to cook it further by frying it, with or without previously warming it by immersion in hot water. When quite fresh, black puddings are savory and agreeable; but as blood decomposes rapidly, they are liable to become tainted before being cooked, and when still apparently fresh, and if kept long after being cooked, they lose their pleasant flavor and become sour and acid. The negroes of the Southern States make a preparation similar to this in "hog-killing" times.

BLANCHING (French, Blanché).—To render white; also to remove hulls or skins from vegetables, etc., as almonds. It is accomplished by putting them in cold water, bringing to a boil, and then plunging in cold water.

BLANC-MANGE (Almond).—*Take :*–Milk, 1 qt; gelatine, 1 oz; almond, 3 oz; rose-water, 1 tablespoonful, white sugar, ¾ of a cupful.

Take one quart of milk; one ounce of gelatine; three ounces of almond (with three or four bitter ones among them) blanched and pounded in a mortar, with a tablespoonful of rose-water; three fourths of a cup of white



Blanc-Mange Mould.

sugar. Heat the milk to boiling; turn in the gelatine, which should have been previously soaked for an hour in a cup of the milk; add the pounded almonds, and stir all together ten minutes before putting in the sugar. As soon as the gelatine has dissolved, remove from the fire; strain through a thin muslin bag, pressing hard to get the flavor of the almonds; wet a mould with cold water, pour the blanc-mange into it, and set in a cold place till solid.

Arrowroot Blanc-Mange.—*Take :*–Arrowroot, 4 tablespoonfuls; milk, 1 pt; sugar, and some flavoring essence.

Wet four tablespoonfuls of best Jamaica arrowroot with a little cold water; pour over it one pint of boiling milk, stirring all the time; sweeten and flavor (with any sort of essence) to taste. Turn it into the sauce-pan; stir constantly while it just comes to a boil; then remove from the fire, turn into a mould, and set where it will cool. Serve cold with sugar and cream.

Chocolate Blanc-Mange.—*Take:*–Milk, 1 qt; gelatine, 1 oz; eggs, 3; grated chocolate, 4 tablespoonfuls; sugar, nearly a cupful; vanilla, 2 tablespoonfuls.

Take a quart of sweet milk; one ounce of gelatine, soaked in a cup of the milk an hour; three eggs, whites and yolks beaten separately; four heaping tablespoonfuls of grated chocolate; not quite a cupful of sugar; and two teaspoonfuls of vanilla. Heat the milk to boiling; pour in the gelatine and milk and stir until it is dissolved. Stir the sugar into the beaten yolks; then beat the chocolate into this, and pour slowly upon the mixture the boiling milk, stirring steadily until all is in. Return the whole to the saucepan and heat gently, stirring carefully, till it almost boils. Then remove from the fire, turn into a bowl, and whip in lightly and briskly the beaten whites with the vanilla. Pour off into moulds, and set away to cool.

Cornstarch Blanc-Mange.—*Take :*–Corn-

starch, 3 oz; milk, one qt; sugar, 2 tablespoonfuls; lemon peel.

Put two tablespoonfuls of sugar, a few pieces of lemon peel and a quart of milk (having reserved one gill) over boiling water; when a film covers it pour in the gill of milk in which the corn starch has been smoothly mixed; stir until thick and leave it for five minutes to cook thoroughly. Pour into a mould wet with cold water. Serve cold with sugar and cream.

Moss Blanc-Mange.—*Take:* Irish moss, 1 teacupful; milk, 3 qts; sugar; flavoring essence.

Put a teacupful of Irish Moss into a dish and pour boiling water over it; leave it to stand about ten minutes. Then wash it out and throw it into cold water to rinse it. Put it into about three quarts of milk, and boil ten minutes or till it thickens. Add sugar, and flavor to taste. Strain through a very fine sieve or cloth into the moulds and set away to cool.

Rice-Flour Blanc-Mange.—*Take:*–Ground rice, 4 tablespoonfuls; milk, 1 qrt; eggs, whites of three; sugar; lemon.

Wet four tablespoonfuls of *ground* rice and a pinch of salt with a little milk, and stir into a quart of boiling milk. Sweeten to taste with refined sugar, and flavor to taste with lemon. Boil eight minutes, stirring all the time, then cool it, and add the whites of three eggs whipped to a froth. Replace it on the fire, and stir constantly till boiling hot; then turn it into moulds and set away. This is an excellent dish for the sick.

Wheat-Flour Blanc-Mange.—Make same as cornstarch or rice-flour blanc-mange.

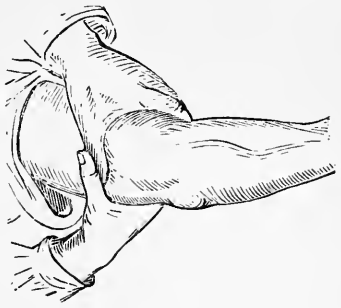
BLANKET.—Bed blankets are of various sizes and qualities. In buying get them amply large, as nothing is more uncomfortable than scant bed-clothes; the large blankets are best also, because they are generally made of better kinds of wool than the smaller ones. To be durable, blankets must have weight, a closeness of fabric, and a sufficient quantity of wool in them; it is necessary therefore in choosing to look not merely at the nice appearance of the pile, but also to the weight and texture. Fine blankets are made stouter and heavier than coarse ones. *Horse blankets* are made of cheap wool and are woven very closely.

BLEACHING.—The process by which colors or discolorations are removed from fabrics and raw materials and their natural whiteness restored.

Linen and Cotton.—When cotton and linen are discolored by washing, age, or lying out of use, the best way of restoring their whiteness is to spread them out on the grass and expose to the dews and winds. If a quicker process is desired, soak the cloth twelve hours in a lye made by dissolving one pound of soda in a gallon of boiling hot water; then boil for half an hour in the same liquid. A mixture must now be made of chloride of lime with eight times its quantity of water, which must be well shaken in a stone jar now and then for three days; then allow it to settle and, when it is drawn off clear, steep the cloth in it for thirty-six hours, and then wash out in the ordinary manner.

Wool.—In bleaching wool it is necessary first to free it from its natural grease; this is done by scouring it with water mixed with stale wine. In using alkaline lyes for this purpose, great caution must be used; for though wool is insoluble in water it is capable of being dissolved by a strong alkali. Sulphurous acid, or the vapor produced by burning sulphur, is likewise employed for whitening wool.

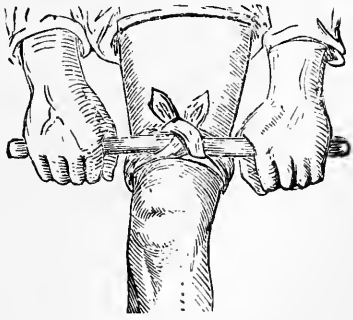
BLEEDING.—The ordinary cases of bleeding which come from cuts and similar accidents are treated of elsewhere (*see* CUTS); but it is very desirable that every one, even children, should understand that *in all cases of severe bleeding the only thing which can be safely depended on*



Finger Pressure.

is pressure. Pressure of any kind properly applied will do; but if nothing else is at hand and the bleeding is rapid, press your finger on or into the bleeding place (as shown in the cut) and *keep it there* till you can have assistance.

A "*vessel-compressor*," or "*tourniquet*," may be applied with much good, if the bleeding be anywhere below the middle of the thigh. It is hardly likely that in sudden emergencies the instrument specially made for the purpose will



Stick Tourniquet.

be at hand, but a substitute may be readily contrived thus:—Tie tightly, at some little distance above the wound, a pocket-handkerchief or

cravat once or twice passed round the limb; then, obtaining a piece of tough stick, push it under the handkerchief, and, by turning the stick, twist the handkerchief more and more tightly, until the bleeding ceases. As soon as this result has been attained, fasten the stick by another handkerchief tied round stick and limb together. This rude tourniquet may save life not unfrequently, by enabling the injured person to be transported even for some distance, without fear of further bleeding.

Lungs (Bleeding at the)—The escape of blood from the mouth, from the throat or lungs, is of little consequence when due to some accidental cause, but when of frequent occurrence it is an indication of lung or heart disease.

Treatment.—Strict rest in bed with the head raised; light diet and ice-cold drinks; mustard to the chest; alum, in doses of 20 grains for an adult, once in two hours. A teaspoonful of salt in water is a popular household remedy.

Nose (Bleeding at the).—This is rather beneficial than otherwise, if not too profuse. When it requires to be stopped, apply cold water, ice, or cold keys to the back of the neck; throw back the head and raise the arms. If this does not stop it, dissolve a little alum in water and squirt it up the nostril with a small syringe. Should this fail, send for the doctor. It is not desirable to plug the nose, as the bleeding finds its way to the top of the throat. Make a roll of paper an inch long, and as thick as a lead pencil, and crowd it, bent, under the upper lip. A *chronic tendency to nose-bleed* may be permanently cured by bathing the neck with cold water every morning.

Stomach (Bleeding at the).—It is a startling sight to see a person vomiting blood, but this is not always dangerous. It may usually be checked by lying on the back and taking occasional small draughts of iced water or lemonade. If the vomiting is severe, give two teaspoonfuls of vinegar and one teaspoonful of Epsom salts in a wineglass of cold water, repeating the dose every half hour till the bleeding stops.

BLISTERS.—Those which are caused by burns or scalds are treated of in their proper places. (*See* BURNS and SCALDS.) Blisters are often produced purposely in medical practice on the principle that morbid action in one part of the body may be relieved or removed by counter-irritation in another and neighboring part; but it is not well to apply them except under a physician's advice. Many substances will produce a blister, such as mustard, iodine, and croton-oil; but the powder of the dry cantharis, or spanish fly, operates rapidly and with certainty, and is now almost invaribly used. The plaster of Cantharides is usually employed as a blister. It should be allowed to remain in contact with the skin about twelve hours. After its removal vesication is promoted by the application of a poultice.

Cantharidal Collodion is often used and requires simply to be painted upon the skin. The raw surface produced in this manner affords a means of introducing medicinal substances; morphine, for instance, sprinkled on this raw surface, is quickly absorbed, and patients may be thus relieved when direct remedies could not be employed, as in violent colic or cholera. (*See* MORPHINE.)

To Dress a Blister.—Great care must be taken in dressing a blister; unless perfect cleanliness is observed, an unhealthy sore is liable to be the result. Spread thinly, on a linen cloth, an ointment composed of one third beeswax to two thirds of tallow; lay this upon a linen cloth folded many times. With a sharp pair of scissors make an aperture in the lower part of the blister bag, with a little hole above to give it vent. Break the raised skin as little as possible. Lay on the cloth spread as directed. The blister should be dressed as often as three times in a day, and the dressing removed each time.

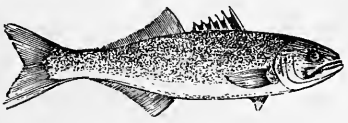
BLOOD (as Food).—Blood consists of two parts, *coagulum* or clot, and the *serum*, and soon after it is drawn it separates into these spontaneously. The coagulum is the part that becomes solid and has the red color; it is very analogous to flesh and possesses almost equal nutritive properties. The serum is nearly identical in substance with whites of eggs, and like it coagulates by heat. The blood of animals is used as food, and is extremely digestible and wholesome,—that of the hog and ox is used for making black puddings; but there is a strong popular prejudice against it which has prevented its coming into general use. Dr. Edward Smith, in his book on "Food," observes that this prejudice is formed partly on the prohibition to the Jews as contained in the Old Testament, and partly on the common belief that blood may be diseased without showing any signs whereby the disease might be recognized. "As to the former," he says, "it may be scarcely necessary to add, that we eat a portion of blood in every kind of flesh, and that even when the animal is killed by cutting his throat after the Jewish fashion, it is not possible to extract all the blood from the body, and that even the Jews must eat some of it. Moreover, blood contains nutritive elements of great value, and is inferior only to the flesh which is made from it.... If there be any ground for fear lest diseased germs should exist in the blood, it may be set aside by the consideration that a temperature of 212° (that of boiling) if freely applied, will suffice to destroy all known elements of disease, and that blood when fresh and so cooked may be eaten with impunity. I think it would be folly to object to the use of blood as a food under proper restrictions, one of which should be that the animal from which it was taken should not be in a state of disease." (*See* BLACK PUDDING.)

BLOODROOT.—POISON; *Symptoms*, thirst, faintness, dimness of vision; *Antidote*: Emetic. —A perennial plant of the poppy family which grows throughout the United States, and flowers beautifully in March and April. When any part of the plant is broken a juice flows out

which is of a deep red color, hence its name. The root is much used in medicine. It is dried and pulverized, and adminstered while fresh, either in the powder or in pills prepared from it, the latter being preferable. A decoction is also made from it, in many parts of the country; but it should be used sparingly in any form. It is an acrid narcotic and emetic, and over-doses have proved fatal in some cases. The diseases for which it has been found most useful are coughs, colds, croup, and fevers: but it is also good for typhoid, pneumonia, scarlatina, rheumatism, jaundice, dyspepsia, etc.

BLOUSE.—(*See* SACQUE.)

BLUEFISH.— Abound along the North American coast, and are known as "snapping mackerel," or "blue mackerel," in Virginia, as "*Greenfish;*" in Carolina, "*Slapjack*," and in Philadelphia as "*Tailors.*"



In season from June 1st to the end of October: weight from two to six pounds. Excellent when fresh, they soon grow strong and rancid.

Baked Bluefish.—Stuff the fish with a dressing made of about two cups of bread-crumbs, a little fat pork chopped fine, one egg, plenty of parsley, and pepper and salt, mixed well together; then sew the fish up. Fry a piece of pork to extract the gravy; add half a teacup of hot water; lay the fish in, sprinkle it over with flour and put small lumps of butter over it; bake one hour, basting often. Dish the fish; add a little water and flour and butter to the gravy; let it boil up once, and turn it over the fish; garnish it with slices of lemon, or grated horseradish.

Boiled Bluefish.—Put the fish in a kettle, cover with cold water; add five stalks of parsley, a middle sized onion sliced, salt, and three tablespoonfuls of vinegar. For a fish weighing five pounds, boil half an hour, and for one of eight boil three quarters of an hour. Serve with drawn butter and eggs, or with lemon sauce, or with anchovy, caper, matelote, or tomato.

Broiled Bluefish.—Split in the back, and clean; spread melted butter over it inside and out; set the flesh side to the fire first, and when this is browned turn the other side; a fish weighing three pounds will take half an hour to broil. When done rub a little more butter on, season with pepper and salt, and serve at once.

Fried Bluefish.—Split in the back, clean thoroughly, and wipe dry; then dip the fish in milk, let it stand five minutes to dry, roll in flour, and fry. *Another way* is to wipe the fish dry, after cleaning, dip in beaten egg, roll in bread-crumbs, and fry. The latter is especially nice.

BOILING.—This consists in keeping the food for a sufficient time in water heated to the boiling point; if the water does not quite boil, it is called simmering. Most meats, to be properly boiled, should be put over the fire in boiling water; but fowls and white meat generally require the water but a little warm, that the heat may penetrate gradually to the centre. All cooks should understand that water is converted into steam by being heated to the boiling point (212°), and that heat employed in the effort to raise it above that point is simply wasted. Some imagine that by using much fire, and causing the water to bubble much, it is made hotter in

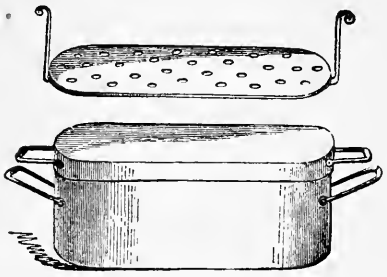
Iron Boiler.

proportion to the noise it makes; but this only causes the water to evaporate, or boil away faster, without making it any hotter, and as the cooking of the meat depends upon the temperature, and not on the quantity of water, the meat will not be done any sooner by boiling fast, but on the contrary will in many cases be hardened on the outside, and longer in cooking. By too rapid boiling also, the meat is not only rendered harder, but its savory juices are to a great extent evaporated and lost. The great art of boiling, therefore, for economy and good cooking, is to keep the water *just under the boiling point;* and after it once boils, surprisingly little fuel will be required to do this. Cooks should also bear in mind that boiling meats for soup, and boiling them for solid food are entirely different processes; and that they cannot have in the same pot a well cooked piece of meat, and a supply of nutritious broth. The process for obtaining one is in fact diametrically opposite to that required for the other. If the object be to make a good soup, the meat should be cut in pieces, put in plenty of cold water, raised gradually to the boiling point, and then boiled well and long. (*See* SOUP DIGESTOR, in article on SOUP.) The solid residue after this is done will be about as nutritious as a piece of sponge. If on the other hand a well cooked piece of meat is desired, it should be put whole in the pot when the water is boiling, and kept just under the boiling point till done; the liquid after this process may be used as a basis for soup.

In boiling vegetables, some require *soft* water and others *hard* (*i. e.*, containing lime salts). Soft water has a greater solvent power than hard, and when the object is to extract the juice of vegetables, as in making tea or barley water, soft water must be used; but when the juices are not to be extracted but preserved in the vegetable, then hard water

should be used with a little salt, and the vegetables put in when it is boiling. Vegetables to be digestible should be boiled thoroughly; and some recommend boiling them in two waters.

In the case of fish, as firmness after boiling is a desirable quality, hard water is decidedly the best, salt should, therefore, always be put into the water in which the fish are boiled and should not be put in until the water boils. (*See* WARREN COOKER.)



Fish Kettle.

BOILS. (*See* ABSCESS.)

BOLOGNA-SAUSAGE.—A large kind of sausage, made in a peculiar way, and so named because manufactured first at Bologna, Italy. They are made of dry, preserved meats; and their nutritive value is much greater than that of fresh sausage, since they are composed of meat entirely. Their flavor is agreeable and varied with garlic and cloves; and their nutritive value is equal to three times their weight of fresh meat. They are eaten raw, but care should be taken lest they are made of diseased pork which would be liable to produce trichinous disease.

BOMBAZET.—A thin, cheap woollen stuff, plain and twilled, with warp of single thread, pressed and finished without glazing. It is 21 or 22 inches wide.

BOMBAZINE.—A mixed fabric, the warp being of silk and the woof of worsted. It can be had occasionally in colors; but it is generally black, and is used as an article of mourning for female dress.

BONE.—Bone consists chiefly of an earthy base, called phosphate of lime and an organic material termed chondrin. Its numerous minute cells and interstices are filled with marrow, When bones are broken to pieces and boiled a long time in water, the gelatine, which is a modification of chondrin produced by cooking,and the oily matter are extracted, thus making an excellent soup or gravy. The nutritive value of bones is not very great, still they may be utilized in the preparation of soup and thus give variety to the table. Hundreds of pounds of good food are thrown away every year, even in poor families, by neglecting to utilize the bones. In making soup from bones, break or rasp them into very small pieces, and boil all day over a slow fire. Strain before using.

BONE-FELON. — A collection of matter forming beneath the periosteum (the covering of the bone) of a joint of a thumb or finger. As the periosteum resists its working its way outward, there are few things which cause so much suffering while it lasts, and if allowed to have its own way, it may end in the loss of the joint affected and thus deform the hand for life. Its coming is manifested by a peculiar keen throbbing, thrilling, and persistent pain; and, at this stage, progress may perhaps be arrested by soaking the part in a mixture made by dissolving a tablespoonful of saleratus in half a gill of vinegar. Let it be used as hot as can be borne, and repeat as often as the pain returns. Painting the part with tincture of Iodine, and then placing the finger for ten or fifteen minutes under a stream of cool water has been recommended. If matter has actually collected, however, *it must be lanced at once down to the bone.* This gives relief in an hour, which well repays for the suffering caused by the operation, which is really less than what is endured in a minute from the felon itself. If allowed to go on, the felon not unfrequently destroys the bone, before coming to the surface and thus causes from two to six weeks of intense suffering and a life-long deformity. In such a case warm poultices should be constantly applied, with a view of lessening the agony.

BONED FOWL.—Chop up and pound in a mortar 1 lb white veal, 1 lb fat pork, ½ box mushrooms, 2 tablespoonfuls parsley, ½ nutmeg, white pepper and salt, 1 teaspoonful powdered thyme, and the raw yolks of 3 eggs. Cut 1 lb of fat salt pork into fillets half an inch square; cut also the remains of a cold boiled tongue in fillets. Make an incision from the neck to the rump; cut the neck off short; draw the crop, pull the skin well back over the breasts, disjoint the wings, draw the skin back and down the breast; clear the whole body down to the legs, then bend them back to start them from the sockets, and cut the ligature; when free keep pulling the skin down all round until the "pope's nose" is reached, cut through it and the carcase is out. Make layers of the prepared *farcie* and fillets of tongue and pork, inserting rows of mushrooms until full; sew it up the back, roll it in a long towel, secure it at each end, place it in a stew-pan with the scraps and trimmings chopped fine, 1 carrot, 2 calfs' feet, 2 onions, 4 cloves, 1 bay-leaf, 2 blades mace, a bouquet of parsley, garnished with 2 sprigs thyme, 3 green onions, the rind of 1 lemon, 2 glasses brandy, ¼ pint white wine, and white broth to cover; boil slowly 2 hours, and press between two dishes. Clarify the braise to garnish the dish.

BONNY CLABBER. (*See* CLABBER.)

BOOKS. (*See* FURNITURE and LIBRARY.)

BOOTS AND SHOES.—The shoe consists of the sole and the upper leather. The part which covers the upper is called the *vamp*, and the part which surrounds the heel is called the two

quarters; these last are sewed together at the heel, and to the vamp at the middle of the foot on each side. *Boots* are simply shoes with a covering extending up the legs, though they are made usually of fewer pieces. The best boots and shoes, both for comfort and durability, have the uppers made of soft well-seasoned *calf-skin* and the soles of stout well-hammered *neats' leather*. Various other kinds of leather, made from the skins of goats, horses, dogs, and seals, are used especially for ladies' shoes; but they are lighter than calf-skin and not so effective in keeping out the wet. A coarse heavy kind of shoes, made with the uppers of canvas and the soles of wood have lately been introduced, but though superior to leather in point of durability and ventilation, they have met with little favor. There is probably no portion of our dress in which fashion has wrought such mischief as in the case of boots and shoes. None of our members are called upon to do more important work than the feet, yet instead of rendering their task as easy as possible they are fettered in close, hard, ill-fitting structures of which the fancy of the shoemaker and not the shape of the foot seems to have dictated the model. The mistaken idea that a very small foot is handsome has crippled many; whereas good taste demands that the foot should have a certain proportion to the rest of the body. But fashion not only compels the habitual wearing of shoes that are too small, but now and then devises eccentricities which are even more directly and generally hurtful. The high-heeled shoes with the heels running forward under the instep, which ladies have been wearing the last few years, not only deform the feet, but distort the muscles of the entire leg, and destroy the equilibrium which the body should maintain on the spinal column. Boots and shoes alike should, while fitting snugly around the instep, be large enough to feel easy at all times and especially to allow the toes some liberty of action. The best method of securing this is to have lasts made especially for the foot, and all shoes made on them. The heel also should be broad and low, and the sole flexible.

To make Boots and Shoes Waterproof.—Melt in an earthen vessel, over a slow fire, half a pint of linseed oil, one ounce of beeswax, half an ounce of rosin, and one ounce of oil of turpentine. If new boots and shoes are saturated with this mixture, and left to hang in a warm place for a week or ten days, they will not only be entirely waterproof but the leather will also be soft and pliable. *The soles* may be rendered waterproof by applying a coat of gum-copal varnish to them, and repeating it until the pores of the leather are filled.

BOUCHÉE.—A small PATÉ (which see).

BORDEAUX WINES. (*See* CLARET.)

BOUILLON. (*See* SOUPS.)

BOX.—A comprehensive genus of plants, embracing numerous species which proceed in regular succession from extremely small shrubs to trees thirty feet in height. Several varieties of the shrub are cultivated in our gardens. The leaves are thick and very green, and the flowers, which are quite small, grow in clusters all over the plant. The *dwarf box* is the species most generally cultivated, and being hardy and evergreen it is unequalled for forming low hedges or borderings for garden-walls and flower-beds. If kept smoothly trimmed these hedges are very pretty, and once fairly started they will last for years without requiring attention. To raise, procure plenty of shoots from the florist and plant them in early spring close together in a rich, dry, and slightly sandy soil. If in growing, some of the bushes lag behind the others considerably, pull them up and substitute more vigorous plants.

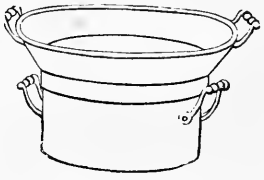
BRAIN FEVER.—A term often inexactly used to denote a variety of fevers in which brain symptoms predominate. It may with propriety be employed to denote the fever resulting from inflammation of the membranes covering the brain, or intense congestion of the brain itself. Exposure to a hot sun, is a well-established cause of brain fever. It may also result from hard drinking, Bright's Disease, and perhaps rheumatism. Acute congestion may likewise arise from excessive study, grief, anxiety, or anger, gormandizing, etc. The symptoms are a severe pain in the head, redness or suffusion of the eyes, violent flushing of the face, disturbed sleep, heat of the head and dryness of the skin, costiveness and sometimes retention of urine. When the disease has advanced these symptoms are followed by delirium or stupor.

Treatment.—As brain fever often proves fatal in a few days, it requires the most speedy treatment; but a mistake is very dangerous, and a physician should be called immediately. When the symptoms first present themselves, the patient should be kept very quiet and only allowed to partake sparingly of farinaceous food, such as water-gruel, roasted or boiled fruits, jellies, preserves, etc. Bleeding from the nose affords great relief, and when it comes of its own accord it is by no means to be stopped, but promoted by applying cloths dipped in warm water to the part. Linen cloths wetted with vinegar and water, cold spirituous lotions, diluted ether, or iced water should be kept constantly on the temples and forehead, renewing them as often as they become dry. Cold applied to the top of the head by means of wet cloths or pounded ice is also excellent. The feet should be frequently placed in warm water; and to assist in diminishing the tendency of blood to the head it should be elevated by pillows. The bowels if confined should be kept open with purgatives, saline laxatives to be employed by preference, and bromide of potassium, in fifteen to thirty grain doses, may be administered every 3 to 4 hours. Besides the application of cold to the brain, the most important thing is to keep the sufferer quiet; he must be soothed and humored even in his whims, and great care taken that he is not disturbed or excited in any way. The symptoms of recovery are a reduction of the heat about the head, a return to consciousness

and power of sleep. An enfeeblement of the memory frequently persists for some weeks following the attack.

BRAISING.—This is simply a more expensive mode of stewing meat. The following French receipt will explain the process: We would observe, however, that the layers of beef or veal in which the joint to be braised is imbedded can afterwards be converted into an excellent soup, gravy, or glaze; and that, consequently, there need be no waste, no unreasonable degree of expense attending it; but it is a troublesome process, and quite as good a result may be obtained by simmering the meat in very strong gravy. Should the flavor of the bacon be considered an advantage, slices of it can be laid on the meat, and tied to it with a piece of tape.

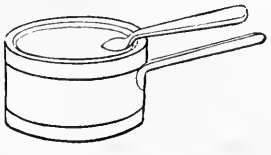
"*To braise the inside* (or *small fillet*, as it is called in France) *of a sirloin of beef:* Raise the fillet clean from the joint; and with a sharp knife strip off all the skin, leaving the surface of the meat as smooth as possible; have ready some strips of unsmoked bacon, half as thick as your little finger, roll them in a mixture of thyme finely minced, spices in powder, and a little pepper and salt. Lard the fillet quite through with these, and tie it round with tape in any shape you choose. Line the bottom of a stewpan (or braising pan) with slices of bacon;



English Braising-Pan.

next put in a layer of beef or veal, four onions, two bay leaves, two carrots, and a bunch of sweet herbs, and place the fillet on them. Cover it with slices of bacon, put some trimmings of meat all round it, and pour on to it half a pint of good beef broth or gravy. Let it stew as gently as possible for two hours and a half; take it up, and keep it very hot; strain, and reduce the gravy by quick boiling until it is thick enough to glaze with; brush the meat over with it; put the rest in the dish with the fillet, after the tape has been removed from it, and send it directly to table."

Equal parts of Madeira and gravy are sometimes used to moisten the meat.



Copper Stew-Pan.

No attempt should be made to braise a joint in any vessel that is not very nearly of its own size. Braising-pans are of various forms. The best is that represented in the accompanying illustration; but a stew-pan of modern form, or any other vessel that will admit of coals being placed upon the lid, will answer the purpose.

BRANDY.—Brandy is made by distillation from wine, and genuine brandy can be made in no other way; it is, therefore, in its pure state the choicest and most agreeable of the class of ardent spirits. The best brandy is made from the white wines of the Cognac and Annagnac district of France; but as 1000 gallons of wine makes only 100 to 150 gallons of brandy, it may be imagined that some inferior wines are generally substituted for delicate and highly flavored wines. In point of fact, however, the greater part of the brandy consumed all over the world, is not made from wine at all, but is simply alcohol distilled and flavored with oil of Cognac. Fiery potato spirits are also frequently converted into so-called brandy by distillation and "flavoring." Among the adulterations of brandy, hot and pungent substances, such as pepper, capsicum, ginger, etc., are added to give the appearance of strength. They may be detected by evaporating a little of the suspected brandy nearly to dryness, when the acrid and burning taste will be sensibly increased if such substances have been used.

The liquors manufactured in this country and known as *apple brandy*, *peach brandy*, *blackberry brandy*, and the like, are not brandies at all but a radically different spirit.

BRANT.—A fine bird much sought after by gunners, and known variously as "horsefoot snipe," and "turnstone." It is very rich and savory, and may generally be found in the markets in April and May, and again in September and October. It is scarcely suitable for eating purposes at other times of the year. For method of cooking *see* SNIPE.

BRASIER. (*See* WARMING-PAN.)

BRASS-WARE.—Before the invention of tinned iron, brass was the most popular substance for making pots and kettles, sauce-pans, stew-pans, and similar utensils. It is less liable to rust or be acted upon by acids and other corrosive substances than copper, and is consequently easy to keep clean, and safer than the latter. It is far from desirable however as a material for cooking utensils, and since iron is both cheaper and better, it should for this purpose, at least, go entirely out of use. Into ornamentation of furniture of course, it enters appropriately enough.

To Clean.—The best substance for cleaning brass-ware is bath-brick, pulverized, and rubbed on vigorously with a coarse, damp rag. Whiting applied dry, is also good.

BRAWN.—The prepared flesh of the wild boar or domestic hog, usually made of the head, cheeks, tongue, and ears. It is a peculiar kind of fat, and is very nutritious for those whose stomachs can dissolve it.

To Make.—Take a pig's head weighing about six pounds; one pound of lean beef; one teaspoonful of salt; one half teaspoonful each of black pepper, cayenne pepper, and mace; a pinch of cloves; and a small onion minced very fine. Clean the head carefully, and stew with the beef in enough cold water to cover. When the bones will slip out easily, remove them, after draining off the liquor; chop the meat up fine while it is hot, put in the seasonings, and pour all into a mould that has been wetted inside. By having special moulds the brawn can be made into a great variety of fanciful shapes.

BRAZIL-NUT.—These nuts, as their name implies, are a native of South America. They have a large, white kernel in a brown, rough, three-cornered shell, taste like the hazel-nut, and are extremely rich and oily. They are indigestible and should be eaten rarely; children, especially, should never be permitted to eat them. The fresh nuts arrive from March to May, but they are not good until they have dried several months.

BREAD.—Bread is, in a peculiar sense, the "staff of life," and is one of the most important subjects in the whole range of domestic economy. Badly cooked meats, or pastry, or vegetables, may be endured with more or less of patience provided there is plenty of good wholesome bread to fall back upon,—they may even be dispensed with for a time; but if the bread is bad, the health of the family cannot possibly be maintained. Bread-making is an art which should be thoroughly mastered by every housekeeper in her earliest experience as such; and the young women should be taught it as they grow up, even if they attempt no other branch of the art of cookery. For the making of good bread three things are indispensable: the right kind of flour, good yeast, and careful baking. The flour should be the best that can be had, and above all things *dry;* new flour cannot be made to answer, it should be at least three months old, and should also be elastic and odorless.

New flour may sometimes be ripened for use by spreading enough for each baking in a large tray and exposing it to the hot sun for several hours, or by setting it near a fire for the same length of time; but this is troublesome, and not always successful, and it is best to return the flour at once if it is found not to be perfectly dry. (The following are good tests in buying flour; on squeezing a handful it should retain the print of the skin; the grain should be perceptible in rubbing between the thumb and finger.) Good, strong *yeast* is also indispensable, for, without it, bread cannot be light and digestible. In the cities what is known as *distillery* yeast may usually be had of the baker, and occasionally good yeast cakes; but home-brewed yeast is most reliable, and consequently most satisfactory to use. (*See* YEAST.) After the dough is mixed,—it should be made as soft as it can be conveniently handled,—it must be set for several hours in a warm (not too warm) place where it will be exposed to a steady, even temperature. Too much heat excites too rapid fermentation, and makes the bread sour; too little, on the other hand, arrests the process, and makes the bread heavy, lumpy, and soggy. Before being put into the oven the dough should be kneaded till it is elastic and flexible as india-rubber. The baking is the part of the process in which bread is most frequently spoiled, and this should be carefully attended to. The ovens must be of just the right heat when the pans are first put in, and the heat must be kept uniform while the cooking is in progress, if a mistake is made in either case the baking is spoiled. As to the degree of heat, it depends somewhat on the substance of which the bread is made, but in no case should the oven be too hot. The best plan is to use a thermometer and decide the degree by experiment; but in the absence of this, if the bared arm can be held in the oven for half a minute it is about right for the dough.

To Make (Plain).—Put eight quarts of flour (sifted) into the tray; pour in a pint of home-made yeast, mix with a pint of warm water; then work them together till a thick batter is made. Scatter a handful of flour over this batter, lay a warm towel over the whole, set it in a warm place to rise. This is called the *sponge.* When the sponge has risen so as to crack the flour on the top, which will take from three to five hours, scatter over it two tablespoonfuls of fine salt; add, in small quantities at a time, about two quarts of warm milk or water; knead the whole *thoroughly,* adding flour enough to make a soft dough; then shape it into a round mass, and set it in a warm place; when light, mould into loaves, and, when these are light, bake from thirty to sixty minutes according to the size.

Barley Bread.—This is very popular in Scotland, Norway and all countries where wheat will not grow, but is seldom made in this country. It is wholesome, however, and nutritious, and very palatable when eaten warm with butter. Use no yeast: but mix the barley-meal with warm water and a little salt to the consistency of a stiff dough. Bake in flat cakes either in the oven or before the fire.

Boston Brown Bread.—*Take:* Home-made yeast, 1 teacupful; flour, 3 teacupfuls; potatoes, 6; water, 1 qt; lard, 2 tablespoonfuls: brown sugar, 2 tablespoonfuls; Indian meal, 2 qts; rye flour, 1 qt; soda, 1 teaspoonful; salt, 1 tablespoonful.

Make a *sponge* with one teacupful of yeast, six potatoes mashed fine with three cups of flour, one quart of warm water; two tablespoonfuls of lard, and two tablespoonfuls of brown sugar. Set to rise over night or for five or six hours. When light, sift into the bread-tray two quarts of Indian meal; one quart of rye flour; and one tablespoonful each of soda or saleratus and salt; mix this up very soft with the risen sponge, adding warm water, if needed, and work in gradually half a teacupful of molasses, Knead well

and set to rise six or seven hours. Then work over again, divide into loaves, and set to rise again for one hour. Then bake four hours in a moderately heated oven.

Brown Bread.—*Take:* Indian meal, 1 qt; rye flour, 1 qt; water, 1 pt; home-made yeast, 1 teacupful; salt, to taste.

Take a quart of Indian meal, scald it with a pint of hot water, and when it becomes lukewarm, stir into it a quart of rye flour, a teacupful of yeast, the usual quantity of salt: and enough tepid water to make a rather stiff dough, set to rise as with other bread, and bake in two loaves an hour and a half.

Corn Bread.—*Take:* Indian meal, 1 qt.; boiling water, 1 qt; yeast, 1 teacupful; salt.

Mix a quart of Indian meal with a little cold water; stir it into a quart of boiling water and let it boil an hour; stir in a little salt, take it from the fire; let it stand till luke-warm, then stir in half a teacupful of yeast and enough Indian meal to make it of the consistency of dough. Set to rise several hours, and when light, bake in two loaves an hour and a half.

Graham Bread.—*Take:* Graham flour, 3 qts.; warm water, 1 qt.; home-made yeast, 1 gill; syrup, 1 gill; salt, 1 tablespoonful; soda, 1 even teaspoonful.

Mix all the ingredients thoroughly, put it in well-buttered pans and leave it in a warm place to rise; or let it rise slowly over night in the bowl in which it was mixed, and, unless very light in the morning, let it stand fifteen or twenty minutes in the pans before putting it in the oven. Bake about an hour and a half.

II.—Thin a pint of light bread sponge with a pint of warm water; add two tablespoonfuls of molasses, a teaspoonful of salt, and sufficient Graham flour to make a batter that can be stirred with a spoon; put it in well-buttered pans, and when light, bake. A part of this may be baked in gem-pans for breakfast or tea. If wanted for tea and the bread is light in the morning, keep it in a cold place until half an hour before the time for baking.

Indian Pone.—*Take:*—Indian meal, 1 qt; lard, 1 tablespoonful; salt, 1 teaspoonful; water or milk.

Take one quart of Indian meal; mix it with enough hot water to make a moderately stiff dough, work in a tablespoonful of lard, and a teaspoonful of salt; mould into thick oblong loaves (or pones), rounded on top; and bake in a rather quick oven till brown. Eat hot with butter. Milk instead of water is an improvement.

Oatmeal Bread.—This is seldom made in this country, but it is very wholesome and not unpalatable. Make as directed for barley bread. When made thick, this bread in Scotland is called *bannock;* the term *cakes* is applied to the thin loaves, which are first baked upon a hot plate or griddle till they are stiff enough to stand upon their edges, and then toasted on the hearth before the fire till they are crisp. In farm-houses they bake a considerable quantity at once, and keep them on a rack fixed to the ceiling to be eaten when needed. They may be kept a long time if the room is dry.

Potato Bread. — *Take:*—Potatoes; flour; yeast; lukewarm water.

Boil good mealy potatoes soft, then peel and mash them fine. Sift flour upon them in the proportion of two-thirds of flour to one-third of potatoes; add the yeast, and enough lukewarm water to bring the whole to the consistency of dough. Knead well. This bread will rise more quickly than common wheat bread, and it should be baked as soon as risen, for it turns sour very soon.

Pumpkin Bread.—*Take:*—Pumpkin; yeast; Indian meal; salt.

Take a ripe pumpkin, stew and strain; add yeast, Indian meal enough to stiffen it, and a little salt; set to rise, and bake in the usual way. This makes excellent bread.

Rice Bread.—*Take:* Rice, 1 pt; rice flour or wheat flour, 2 qts; home made yeast, half a teacupful; salt 1 teaspoonful; milk.

Boil a pint of rice till soft, and mix it with two quarts of rice flour or wheat flour. When cool add half a teacupful of yeast, a teaspoonful of salt, and enough milk to make a *soft* dough. When it has risen, bake in small buttered pans.

II. *Take:*—Rice flour, 3 pts; wheat flour; milk and water; yeast, ½pt; salt 2 teaspoonfuls.

Mix three pints of rice flour with cold milk and water to a thin gruel, and boil it three minutes; then stir in wheat flour till as stiff as can be stirred with a spoon. When this has cooled down to blood heat, add half a pint of home-brewed yeast, and two level teaspoonfuls of salt. Knead into soft, elastic dough, and when light, bake in a moderately quick oven.

Rye Bread.—*Take:*—Indian meal, 3 cupfuls; rye flour, 4 cups; wheat flour, 6 cups; sugar, 1 cup; home-made yeast, 1 cup; warm water.

Mix three cups of Indian meal, scalded, with four cups of rye flour, six cups of wheat flour, one cup of sugar, one cup of yeast, and enough warm water to reduce to the consistency of soft dough. Knead well, and when risen bake three-quarters of an hour in small buttered pans, or cups.

II. *Take:*—Rye flour; milk or water; yeast; butter; salt.

Wet up rye flour with lukewarm milk (water will do but is not so good). Put in the same proportion of yeast as for wheat bread. For two quarts of flour put in a teaspoonful of salt, and a tablespoonful of melted butter. Knead into a soft dough, and set to rise. When light, put it into pans, without moulding it up; let it remain in them twenty minutes, and then bake slowly three or four hours.

Stale Bread (to improve).—Steam it half an hour or so and shut it up from the air.

Unleavened Bread.—*Take:*—Flour; warm water or milk; lard; salt.

This is made without yeast or fermentation, and is the simplest and easiest way to prepare bread, though not the healthiest. Flour made into a stiff dough with warm water or

milk, a little lard, and suet, and baked in thin cakes, is very palatable eaten hot. It may be baked as soon as mixed. The Jews make the bread in this way which they use for the Passover or "feast of unleavened bread."

BREAD-CRUMBING is performed by rolling in dry, finely-sifted bread-crumbs, then into a mixture of one egg beaten with one-third of a cup of milk—salt and white pepper to taste—then into bread crumbs again, great care being exercised to cover the whole surface, to prevent the grease from entering. In bread-crumbing sweet dishes, dispense with the salt and pepper in the egg mixture. To broil anything bread-crumbed, proceed as described, finishing by dipping in melted butter and in bread-crumbs again.

BREAKFAST.—The substantial and hearty meal partaken of by Americans, is the bone of a very great contention. On the one hand it is maintained it is *the* ruin of digestion and the most prolific source of dyspepsia, etc. On the other hand it is shown that, for a busy, active people, and also for a people who generally have only two meals a day—breakfast and dinner—the meal is none too substantial. However, which is right or wrong, must be a matter of individual opinion and experience.

The difficulty lies in *what* is eaten at breakfast. More attention could be, with very great advantage, bestowed on this meal. The table, to begin with, could be fresher and more cheerful, with flowers and fruit; table-cloth and napkins white, with a colored border too, have a much more pleasing effect than a cloth entirely colored. Too often the breakfast-room is about the worst for the purpose in the house—dark, dismal, and chilly.

The dishes should be varied; a change should be striven for every day. The beefsteak one day should be plain, another day with fine herbs or stewed tomatoes over it, with brown oyster sauce or onion sauce, etc.; then vary it with chops, eggs, kidneys broiled, stewed, or *sauté;* with fish, in the many different ways described; tripe, oysters, liver, and the many other preparations given, such as savory hashes of game, beef, lamb; with slices of cold, boiled, and roast beef, mutton, etc., grilled or devilled, and served with any sort of piquant sauce.

Fresh fruit and salads are to be commended for breakfast—very relishable and extremely healthful. Oatmeal, too, is to be particularly recommended; eat it the first thing at breakfast every morning. Eschew too liberal indulgence in hot breads; accustom yourselves to eating bread (home made) twelve hours old.

Breakfast parties are rapidly coming into fashion—they have been popular abroad some time—usually served at 9 A. M. to 12 M. Of course the earlier they are served the more appropriate they are as breakfasts. Some bills of fare are given as selections for parties and also for family use. The dishes marked in italics may be left out, if thought too elaborate, without spoiling the effect of the breakfast.

FAMILY BREAKFASTS.

SPRING.

Oatmeal and milk.
Stewed apples.
Rolls, butter. Coffee, chocolate, broma, or tea.
Beefsteak, broiled oysters.
Lyonnaise potatoes, poached eggs on toast.
Rice cakes, syrup.

SPRING.

Cracked wheat and milk.
Stewed prunes.
Bread or rolls, butter, coffee, etc.
Mutton chops, fried bacon.
Boiled eggs, potatoes à la maître d'hotel.
Waffles, cinnamon and sugar.

SPRING.

Fried hominy.
Stewed dried peaches.
Rolls or bread, butter, coffee, etc.
Broiled ham, with fried eggs.
Mutton and potato hash, browned.
Baked potatoes.
Flannel cakes, powdered sugar.

SUMMER.

Coarse hominy, boiled.
Strawberries and cream.
Bread, butter, coffee, etc.
Broiled chicken, stewed potatoes.
Dried beef, dressed with cream.
Radishes.
Muffins.

SUMMER.

Oatmeal and milk.
Fresh currants and sugar.
Buttered toast, bread, coffee, etc.
Broiled blue or whitefish.
Stewed potatoes.
Minced mutton, served on toast.
Stirred eggs.
Hominy cakes, syrup.

SUMMER.

Cracked wheat and milk.
Fresh raspberries.
Rolls, butter, coffee, etc.
Cold roast beef, sliced thin.
Frizzled ham, with eggs.
Fried potatoes, sliced cucumbers.
Graham gems, or popovers.

AUTUMN.

Oatmeal mush, fried in slices.
Peaches and cream, or blackberries.
Brown bread, rolls, butter, coffee, etc.
Lamb chops, fried potatoes.
Mushrooms baked, and served on toast.
Sliced tomatoes, dressed as a salad.

AUTUMN.

Hulled corn, with cream.
Baked pears, grapes.
Bread, butter, coffee, etc.
Veal cutlets, potato balls.
Omelette, with grated ham.
Virginia bakes (thin corn-meal pancakes).

AUTUMN.

Coarse hominy, boiled and browned.
Peaches and cream.
Bread, butter, coffee, etc.
Beefsteak, oysters on toast.
Stewed potatoes.
Muffins.

WINTER.

Fried mush.
Baked sweet apples.
Rolls, bread, butter, coffee, etc.
Turkey hash, stewed potatoes.
Salt mackerel.
Buckwheat cakes, syrup.

WINTER.

Cracked wheat.
Baked pears.
Rolls, Graham bread, butter, coffee, etc.
Sausages, garnished with fried sour apples.
Quail on toast, baked potatoes.
Buckwheat cakes, syrup.

WINTER.

Fried hominy.
Stewed apples.
Bread, butter, coffee, etc.
Venison steak, cold spare-rib sliced.
Potatoes à la maître d'hotel.
Buckwheat cakes, syrup.

BREAKFAST PARTIES.

EARLY SPRING.

Grapes, apples, oranges.
Cutlets of bass en papilotte. / Cucumbers pickled. — Latour Blanche.
Roast English snipe. / Baked mushrooms. — Sherry.
Lobster salad. / Bread, butter, crackers. — Coffee.
Chocolate éclairs.
Vanilla ice-cream.

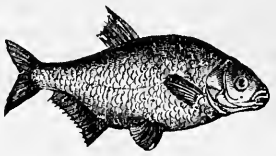
SUMMER.

Berries and peaches, with cream.
Brook trout broiled, with tomato sauce. / Boiled potatoes, pickled gherkins, and olives. — Chablis.
Fillets of beef sauté, with Lima beans. — Chateau La Rose.
Cauliflower bread-crumbed.
Fillets of chickens en fricassée, with rice. / Brussel sprouts à la Bechamel. — Hockheimer.
Fried oysters.
Celery and lettuce, mixed with mayonnaise.
Tutti frutti, assorted cakes, coffee.

WINTER.

Chicken consommé with poached eggs. (Madeira.)
Small middle cut (*darne*) of salmon, with anchovy sauce and shrimps. / Potatoes à la Printanière. — Chateau Latour.
Chicken croquettes. / *Canned string beans* (*Haricôts verts*). — Clos Vougeot.
Sorbet au kirchwasser.
Roast saddle of Southdown mutton, sauce soubise. / Turnips au velouté. — Sauterne.
Broiled quails aux croûtons.
Endive with plain dressing.
Cream, in mould of swan and cygnets. / *Macaroons*, bonbons, *chocolate wafers*. / Fruits, and nuts. — Sherry.
Vienna coffee (*coffee with whipped cream piled on it*).

BREAM.—The *variegated bream* or *dace*, the only species known here, abounds in fresh inland waters from New England to Texas. It is a small, flat, perch-shaped fish, variously



Bream.

colored, and rarely over six inches in length. It is not very highly esteemed for eating purposes; but is, nevertheless, sweet and daintily flavored, and makes an excellent dish fried. Bream may be found in the markets during the winter months. Prepared and cooked like mackerel.

BREWING.—The process by which ale and beer are made. All malt liquors are manufactured from malt, which is usually produced from the parched grain of the germinating barley; though it can be made from wheat and other seeds, and in fact from any substance containing sugar. The first step in the process of brewing is to select barley with full, round, heavy and sweet grains, of uniform quality, and not a mixture of different crops. This grain is first *steeped* in cold water for a period of not less than forty hours, in order that it may soak up the utmost possible quantity of water; if the water during this time exhibits any signs of fermentation it must be drawn off and replaced with cold water. After the steeping it is spread upon the floor of the malt house to a depth of about sixteen inches, which is called the *couch*. It is allowed to remain in this situation for twenty-six hours; it is then turned by wooden shovels, and the depth of the couch is somewhat diminished. This process is repeated twice a day or oftener, and the depth of the barley is gradually diminished. In this state the barley absorbs oxygen from the air, and gives out carbonic acid, the temperature of the barley in the meantime being greatly increased, so that it shows a heat ten degrees above that of the surrounding atmosphere. At the time this part of the process is going on, the barley gives out an agreeable odor, like that of apples, and becomes covered with moisture. The appearance of this moisture is called *sweating*. The interior of the grain by this time has undergone considerable change, its color has become whiter, and from being firm and dense it has become loose and crumbles to powder between the fingers. It is now taken to the kiln, and exposed to a heat of 90°, which is gradually increased to 140° or even higher. The tiny rootlets which had begun to sprout forth are then cleared away, and the grain has become *malt*. Brewers use three kinds of malt, which are known as pale or amber malt, brown or plain malt, and roasted or black malt. The first only is fermentable, the second is employed to give flavor to beer, and the last is used as a coloring matter to

give the dark color to porters and stouts. The two last malts are made by carrying the roasting process so far as to destroy the sugar; whilst in the black malt it is charred by the heat to which it is exposed.

After the malt has been prepared the brewing process proper is commenced, and this also consists of several distinct operations. The first is to grind the malt, and this is done either by millstones or iron rollers. The grist thus produced has now to be *mashed*. For this purpose the malt is put into a mash-tub, and then hot water is let in upon it and run off by taps from the bottom of the tub. Successive quantities of hot water are in the same manner run through the malt, and the *worts* thus obtained are mixed together and introduced into a large copper. The hops are then added and the liquor is boiled; after boiling it is strained from the hops and let into vessels to cool. When brought down to the proper temperature, the liquor is passed into the fermenting tub. There a quantity of yeast is added, and when the fermentation has brought the quantity of sugar down to a certain point, the yeast is cleaned away; this process is called *cleaning*. The beer is now run into vats or casks, which is called *racking*. It is still, however, thick and muddy, and a solution of gelatine or isinglass is added for the purpose of *fining* it. The beer is then bunged up, and is ready for use at various periods. Beer can be made to vary greatly in its quality according to the way in which this process of brewing has been carried on. Of course the stronger the wort, the more sugar and the more alcohol as the result of fermentation; but the fermentation may be carried up to various points. By stopping it before the latter stage, the sweet ales are made, which become stronger by keeping. If the fermentation is not arrested but carried on till the sugar is exhausted, and a large quantity of hops is added, the pale bitter ales are produced.

BRICK.—A building material made of clay in rectangular blocks, and baked in the sun or by fire. When they are well made, and properly burned, there is no substance for building purposes equal to bricks in durability. All clays consist of two kinds of earth, alumina and silica, and when kneaded with water form a paste that is plastic or capable of being moulded into any form. In many parts of the country, good brick earth exists in a natural state, but frequently there is either too much or too little sand, and this has to be rectified either by adding "fat" or sticky clay or sand.

The common process of brick-making is as follows: Brick earth, consisting of a clayey loam, is usually dug in September and exposed in heaps of a few feet in height to the action of the frost during the winter, which pulverizes and tempers it. The small stones are then separated by grinding it in water and running it through a grating. It is then mixed with water to the consistency of cream, and after standing till it has acquired a sufficient pastiness, it is tempered by being run through a pug-mill, when it is ready to be moulded. Before the invention of the pug-mill, the mortar was thrown into a shallow pit in which it was trodden out by the feet of men and oxen. As the clay comes out of the pug-mill it is taken to the moulder's bench and separated into small pieces. Each of these pieces is then placed into the mould, pressed flat, and the top scraped off with a flat stick. The newly moulded bricks are then carried in a wheelbarrow to a place where, arranged on each other diagonally, with spaces between, they are dried in the air sufficiently to bear removal, and are then ready for burning. Should the weather be fine, a few days will suffice for this drying. In baking bricks they are arranged either in *kilns* or *clamps*. The former are permanent ovens on an immense scale, and are commonly used in England; the open method of arranging the bricks so that they form their own ovens is the plan almost universally adopted in this country. The top and sides of these kilns or clamps are built of bricks that have been baked, and flues for the heat are carried through every part of the pile. From 20,000 to 1,000,000 bricks are baked in one kiln, and the average time for baking is eight days.

In purchasing bricks care should be taken to select those which have been well burned, and which look smooth and solid. If the baking has been imperfectly done, or the proportion of sand in the clay was too great, the bricks will crumble to pieces when exposed to the weather. A good test when hard bricks are desired, is to soak a piece in water; if the baking has been thorough it will not dissolve into mud.

BRIGHT'S DISEASE.—A term applied to a number of different affections of the kidneys, so called because they were first described by Dr. Bright. The causes of kidney diseases are any which cause congestion of the kidneys—indulgence in strong drink, exposure to wet and cold, scarlet fever, fever and ague or similar diseases, and pregnancy. The symptoms of Bright's disease depend upon whether the patient suffers from the acute or chronic form. In acute cases there are pains in the back and loins, at first slight and occasional, but gradually dull, heavy, and settled, accompanied with restlessness and fever, and the usual functional disorders in other organs; loss of appetite, vomiting and sometimes purging, and diminution or entire suppression of the urine. These symptoms are succeeded by swelling of the face and extremities, and in extreme cases by general dropsy. Should the above symptoms fail to point out the disease, heat applied to the urine will at once indicate its character, as there is in Bright's disease always more or less albumen in the urine which solidifies on the application of heat. The symptoms other than those furnished by boiling the urine, unless dropsy exists, are as a rule so obscure in chronic cases as rarely to be recognized except

by a practiced physician. Acute cases of Bright's disease usually recover under suitable treatment. Chronic cases are indeed incurable, but with careful attention to the health, and judicious professional care and advice, life is often prolonged for many years. Medical aid must be had in all cases.

BRINE.—The solution of salt and saltpetre usually made use of in preserving meats. An excellent brine may be made by mixing a pound and a half of sugar or molasses and two ounces of saltpetre (or saleratus) in four gallons of water; if it is to last only a month or two, put in six pounds of salt, if longer nine pounds. Boil all together gently, skim, and then let it cool. Put the meat in the vessels in which it is to stand, and pour the brine on till it is covered. At least once in two months the brine should be boiled and skimmed, and have two ounces of sugar and half a pound of salt added. Even then it is doubtful if brine can be kept fit for use beyond a few months' time. It acquires poisonous properties from standing long in contact with the meat, and unless the scum which rises to the surface is kept carefully skimmed off, fatal effects may result from its use.

BRISKET.—That portion of the breast of beef which lies next to the ribs. It is rather coarse in grain and in flavor, but makes excellent soup or broth, and is a very good piece corned or salted. (*See* BEEF.)

BRISTOL-BOARD.—A kind of stiff strong pasteboard, made smooth by glazing, and much used for boxes, and such portions of needlework as require stiffening. It is also much the best material for the cutting of patterns which are much in use.

BRISTOL-BRICK.—A sort of brick used for cleaning steel and all kinds of cutlery, manufactured for some years exclusively in Bristol, England. A small vein of sand suitable to the purpose was found near Liverpool, but was soon exhausted. Shortly afterwards the same kind of sand used in the Bristol bricks was discovered by accident at South Hampton, N. H.; and since that time, bricks fully equal to the imported article have been manufactured extensively in this country. In using, pulverize and rub with a wet cloth.

BRITANNIA.—A composition of tin, antimony, copper and brass, which has entirely superseded pewter and tin in the manufacture of very many articles of household use. It is not easily acted upon by acids, and is perfectly safe to use for cooking and table purposes. It also takes a high polish, and does not readily tarnish; when kept very bright it has great beauty, far excelling pewter, and approaching in lustre to silver. There are various qualities of Britannia ware, arising from the introduction of lead into some kinds of it; the best is firm and silvery looking, and will not easily bend. Coffee-pots, tea-pots, and similar utensils, made of the britannia metal should not be placed on the fire, as they are liable to melt on fires at high temperatures.—Most of the silver-plated goods now in such general use have britannia for their base.

BROADCLOTH.—A fine quality of woollen cloth, about twenty-nine inches wide, and very closely woven, with a short smooth nap. It is manufactured chiefly for men's outer garments, though used also for ladies' cloaks, coats, and the like, and may be had in any of the darker colors. In cutting broadcloth, shrink it first by wetting in cold water and exposing to the sun, and be careful to cut so that the nap will smooth downwards.

BROCADE.—Brocade proper is a stout silken stuff, variegated with gold and silver, raised and enriched with flowers, foliage, and other ornaments, and was very much used for women's dress during the 17th and 18th centuries. This fashion of dress was never in good taste and did not last long, and the name was then given to rich silk stuffs which were adorned with worked flowers without gold or silver. At present the term brocade is applied to various silks, as satins, taffetas, lute-strings, and even to woollen stuffs and grosgrains, if they are ornamented with flowers or other figures.

BROCATEL.—A fabric of silk or wool, or of both combined, used for upholstering; it is usually of rich designs, requiring the greatest care in its wearing; and until very lately was woven exclusively on hand looms. The French brocatel is the best, but is very costly.

BROCCOLI.—A species of cabbage very closely resembling the cauliflower, from which it differs by no very precise characteristic save that in most varieties the head of the broccoli is purplish, while that of the cauliflower is white. The broccoli is very hardy and prolific, and may be raised by sowing the seed in open beds early in the spring, or in summer, or autumn, and transplanting the plants once or twice. It has a woody stem, and may be propagated by cuttings as well as by seed. To do this take a portion of the old stem containing an eye or bud, dry it well in the sun, then stick it into the garden soil, and do not water till it shows signs of growing. Plant in rows like cabbage. Broccoli is generally abundant in the market from September to November.

Boiled Broccoli.—Clean and wash the head well in cold water, throw into boiling water with a little salt and a little flour, and boil till tender, which will take from ten to fifteen minutes, and then drain them. Serve hot with drawn butter.

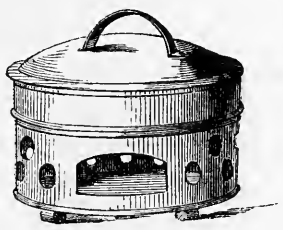
Eggs (Broccoli with).—Boil two or three heads as above; have ready two teacupfuls of butter drawn in the usual way, and beat into it, while hot, four well whipped eggs. Lay buttered toast on the bottom of a hot dish and place on this the largest head of broccoli whole, as a centre-piece, arrange the smaller heads quartered about this, and pour the egg-sauce over the whole.

Fried Broccoli.—Prepare as above, and boil about five minutes or until half done; then dip them in batter and fry in hot fat.

Dish them in a hot dish, sprinkle salt all over them, and serve at once hot.

BROILING.—For steaks, chops, and in fact all kinds of meat, broiling is in every respect a better method of cooking than frying. It produces a much more palatable and wholesome dish, and has the further recommendation of being the most expeditious and simplest mode of cooking. Broiling is simply a quicker kind of roasting, the meat being placed *over* instead of before the fire. In order to do it well the fire should be glowing hot and free from smoke, and the meat should be turned often so as to expose all sides to the heat equally; for this purpose broiling tongs should be used, and not a fork which lets out the gravy. As the surface of the meat is set firm almost immediately, the internal juices are retained, and this accounts for the great juiciness and savoriness of meat well broiled. Of all methods of cooking, broiling is the best suited and most acceptable to invalids; and it recommends itself to small families, and those who have to do their own cooking, as affording a means of dressing a small quantity of meat hot as delicately as the largest quantity. The time required for broiling will depend on the kind of meat, and the thickness of the slices into which it has been cut; but for the ordinary steak or chop fifteen minutes will usually suffice.

Steaks or cutlets may be quickly cooked with a sheet or two of lighted paper only, in the apparatus shown below, and called a Conjuror. Lift off the cover and lay in the meat properly seasoned, with a small slice of butter under it, and insert the lighted paper in the aperture shown in the plate; in from



A Conjuror.

eight to ten minutes the meat will be done, and found to be remarkably tender, and very palatable: it must be turned and moved occasionally during the process. This is an especially convenient mode of cooking for persons whose hours of dining are rendered uncertain by the nature of their avocations.

BROKEN BONES. (*See* FRACTURES.)

BROMA. (*See* CHOCOLATE.)

BRONCHITIS. An inflammatory disease of the bronchial tubes or air passages between the lungs and the throat. It is rarely a serious disease except in the young, aged and feeble. Its treatment had, however, better be left to the medical adviser. Bronchitis, when not simply a companion of some other disease, is not unfrequently brought on by cold or sudden changes in the weather; and the symptoms are at first those of a common cold in the head, accompanied by fever, and an occasional hacking cough. The cough increases in frequency, pain in the chest is experienced during the act of coughing; and the patient has a feeling of weariness and oppression. If the attack is severe, all these symptoms become more intense, and moderate fever is developed. The breathing in asthmatic persons produces a kind of wheezing noise, and as the disease progresses, the mucus raised in coughing becomes thick, yellowish and viscous. The cough is then said to become loose, and a feeling of comfort is experienced. In the course of a few days, if the disease has been arrested, the symptoms begin to decrease in severity, the expectorated matter becomes less abundant, the pain in the chest and difficulty of respiration pass off, and the disease ends in convalescence.

Treatment.—In the earlier stages of catarrh the development of bronchitis may frequently be arrested by frequent use of a gargle made by dissolving a teaspoonful of common saleratus or chlorate of potash in a tumbler of water. Should this fail, and bronchitis become developed, a mustard plaster should be applied to the chest (not strong enough to draw a blister), the feet bathed in hot water, and warm emollient drinks, such as barley water or linseed tea, administered. Ten grains of Dover's powder taken at bedtime by an adult has a marked influence in shortening the disease. If the obstruction becomes great and breathing difficult, an emetic may be given, and the bowels, if constipation exists, should be kept open during the whole course of the disease by mild laxatives. The diet of the patient while the bronchitis maintains its hold upon him should be low and farinaceous. *Chronic Bronchitis*, which is sometimes a sequel to the acute, and sometimes a disease of old age, shows fewer marks of inflammation but more of thickening and dilatation of the air tubes; the cough is generally loose and the expectoration abundant and easy. Chronic bronchitis unattended by asthma or dilatation of the air cells gives little difficulty in breathing, and does not tend directly to destroy life. The treatment should be conducted under the direction of an intelligent physician.

BRONZE.—An alloy of copper and tin, to which lead, zinc, and silver are sometimes added to give greater brilliancy to the compound, or to render it more fusible. The zinc is generally added in the form of brass, and sometimes brass is used instead of tin; the compound is then nothing more than brass with a very large proportion of copper. In former times bronze was extensively employed in the manufacture of domestic utensils and articles of furniture; it is at present used to some extent for similar purposes, but the modern improvements in casting iron, which is

a much cheaper material, have superseded the use of bronze for most purposes. The chief use to which it is put now in household art is in the manufacture of statues, vases, candelabra, candlesticks, lamps, brackets, door knobs, and other articles of ornament. For these it is one of the richest, most manageable, and most durable of substances; and there are many other articles of household ornament or utility to the manufacture of which it might be advantageously applied. Bronze requires no "cleaning" in the ordinary meaning of the word, since the dark olive color which it acquires by age and exposure is considered one of its greatest beauties. Should it become greasy or spotted, however, it may be washed in warm water with plenty of good soap and gentle rubbing.

BROOM.—A family of plants embracing several species of shrubs and small trees, with leaves in threes, and yellow or purplish-white flowers. The Spanish broom is hardy and rapid in growth, and will thrive in any dry and slightly sandy soil. Propagated by cuttings.

Broom.—A new broom always gives trouble by sowing the carpet with fine bits that break from the ends of the corn. This may be prevented by holding it, for a few minutes, immersed nearly up to the point where it is sewed, in boiling suds. The corn will not become brittle so soon with age, if the broom is kept habitually moist. Too thick a handle makes tiresome sweeping; a painted or varnished handle should never be used. Never sweep in a sick-room; take up the dust by going over the carpet with a damp sponge.

BROTH.—In English and French cookery, especially in the latter, broth or *bouillon* forms the basis of nearly all soups and gravies, as well as of many other dishes; and this is one reason of their superiority to similar preparations in American cookery in which water or milk is used instead. Properly speaking, broth is made only from beef with such vegetables and spices as are necessary to flavor it; but the term is also commonly applied to a similar preparation of mutton and veal, and of barley.

Barley Broth.—Take four ounces of Scotch barley, four ounces of onions, four ounces of oatmeal or Indian meal, and two ounces of butter. After washing the barley well, soak it in cold water for twelve hours; then set it on the fire in two quarts of water, adding the onions and a little salt, and boil gently for an hour and a quarter. Melt the butter in a saucepan, stir in the meal till it becomes a paste, and then add a little of the broth gradually till it is of a proper thickness to mix with the whole quantity; stir well together till it boils, and add a dram of pounded celery seed mixed with a little broth; simmer gently a quarter of an hour longer, and serve.

Beef Broth. (*See* SOUPS.)

Mutton or Veal Broth.—To each pound of meat add a quart of cold water, bring it gently to a boil, skim it very clean, add salt in the same proportion as for *bouillon* (*see* SOUPS), with spices and vegetables also, unless *unflavored* broth is desired, when a few pepper-corns, a blade or two of mace, and a bunch of sweet herbs will be sufficient; though for some purposes, even these, with the exception of the salt, had better be omitted. Simmer the broth for about four hours, unless the quanity be very small, when from two and a half to three will be sufficient. A little rice boiled down with the meat will both thicken the broth and render it more nutritious. Strain it off when done, and let it stand till quite cold that the fat may be entirely cleared from it; this is especially needful when it is to be served to an invalid.

BRUISES.—In slight bruises, if there is much pain, warm applications, such as a bread poultice, or flannel dipped in very hot water and frequently renewed, will usually afford relief. A thin slice of raw meat bound on the part is said to remove the discoloration quicker than anything else. If inflammation sets in, an application of ice will deaden the pain. An ice-bag, if the spot will support it, or cold water is most grateful. A lotion of one teaspoonful of arnica in six of water is a popular remedy for relieving pain and promoting the absorption of the blood poured out by the ruptured vessels; arnica alone is apt to prove irritating to the parts in persons possessing very sensitive skins, if used too freely. The so called "Anodyne liniment," that which can be obtained from the apothecary, is very useful in ordinary bruises of a painful character. If the contusion is severe and inflammation threatens, warm bread poultices or hot flannels may be applied. The patient must be kept quiet for some days, and avoid stimulating food or drinks. The change of color in the injured part from black, through many degrees of shade to a dingy yellow is due to alteration in the effused blood, and is an indication of slow recovery. In those cases when the wound is very severe, medical aid must be summoned at once, and the only treatment that can be ventured on without such aid is to support the injured part, especially during removal, and apply cold water dressing and stiff bandages. When the wound is on the head, and of such severity as to stun the person injured, place the patient in a recumbent posture, incline the head slightly backward, and those who are anxious to do something may try to bring about a reaction by causing him to inhale pungent salts, hartshorn, or any strong scent. Bathe the bruise with cold water and at the same time apply mustard poultices or hot lotions to the wrists and ankles. Perfect quiet after such a contusion is very important, as inflammation of the brain may possibly result from it.

BRUSHES are more used than people generally realize. When practicable, it is worth while to occasionally lay in an assortment from the factory, rather than buy them piecemeal from the druggist, grocer, etc. The most costly are generally cheapest, infe-

rior ones not only being perishable but doing no work while they last.

The bristles should always be set in one solid piece of wood or bone. Supplementary pieces glued on the back tend to come off.

White bristles in toilet brushes are not as stiff or durable as unbleached brown or black.

A crumb-brush used a few times is not fit to come on to the table. A metal crumb-scraper is much preferable. A brush used with water should afterwards be placed where it will dry moderately fast. Water will soften it, and great heat will make bristles brittle. (*See* CLEANING. For tooth-brushes, *see* TEETH.)

BRUSSELS SPROUTS.—A species of the cabbage family much esteemed on the Continent and in England but not much cultivated here. It closely resembles Savory, is very tender, and considered by epicures to be the best of all the cabbage tribe. The sprouts are best after the frost has touched them, and are in season from September to January, and are eaten as greens. They should be drained carefully after boiling (like BROCCOLI), and eaten hot with bechamel sauce. (*See* BECHAMEL under SAUCES.)

BUCCANED MEAT.—Buccaning is a method of preserving meat practised in some parts of the West Indies, and the pirates who infested those islands in the seventeenth century received their name of "Buccaneers" from their raiding upon the settlers' flocks and curing the meat in this way. The flesh is cut in pieces of the length of the arm and salted in the usual way; next day the pieces are laid upon a grating or hurdle, made of sticks and called a bucan, and placed at some height above the ground; a wood fire is made below and a thick smoke produced. The meat is thus partly roasted and partly dried as well as smoked. Large quantities are cured in this way in the hunting region of Cuba, San Domingo, and Jamaica, and the flavor is said to be peculiarly rich and delicious. Occasionally it is brought to this country, and the process might be tried here with advantage.

BUCKRAM.—A coarse kind of linen cloth, stiffened with glue, and originally having open holes or interstices between the threads. It is used chiefly for stiffening certain portions of men's coats and ladies' dresses, and as the groundwork for worsted work and some kinds of heavy embroidery.

BUCKSKIN.—The skin of the deer tanned in a peculiar manner which renders it extremely soft and pliable. Buckskin has polishing powers which render it much superior to cloth, and every housewife should have at least one piece for brightening silverware and jewelry, and another for polishing finely finished furniture, such as pianos, etc. Nothing equals it for cleaning windows, cutlery, looking-glasses, and the like, and the choicest metallic articles that are liable to rust should be laid away in it when not in use. In buying buckskin see that it has no hard or lumpy spots in it, as these indicate that it is imperfectly tanned and comparatively worthless in consequence. Always use it dry—buckskin is ruined generally when it has been wetted.

BUCKWHEAT.—Though it is hardly entitled to rank among the cereals, buckwheat is extensively cultivated for human food in this country and on the continent and to a much less extent in England. It can be grown on poor sandy soils if plowed in as a green crop. It grows rapidly with little cultivation; and it is excellent food for poultry. Cows are largely fed on buckwheat bran. It increases the quantity of their milk but makes it thin. Buckwheat contains more sugar than barley even, and is used chiefly in the United States for making the delicious dish called *buckwheat cakes*. These cakes are extremely palatable, easily digested, and though they do not contain all the elements of nutrition, their deficiencies are made up by eating with them molasses, or sugar, or butter, or cream. In buying buckwheat flour, get only small quantities at a time and keep it in a tightly covered box or tub. It is sometimes infested with little black bugs, and an examination must occasionally be made for them.

Buckwheat Cakes.—I. *Take:*—Buckwheat flour, 1 qt; milk or water, 1 pt; yeast, ½ teacupful; salt, 1 teaspoonful.

Mix a quart of buckwheat flour with a pint of lukewarm milk or water, and half a tea-cupful of home brewed yeast, or 1 dessertspoonful of distillery yeast, and set to rise over night. In the morning add half a teaspoonful of salt and if the batter is at all sour add a teaspoonful of saleratus dissolved in a little milk and strained, or a teaspoonful of soda. If the batter is too thick to pour out easily, add enough warm milk or water to thin it. Make the cakes large, and fry them in just enough fat to keep them from sticking to the griddle.

If a cupful or so of the batter be left in the bottom of the vessel in which it is mixed, it will serve as a yeast for the next night instead of getting fresh yeast. In cold weather this plan will answer for a week or more without setting a new supply.

II. *Take:*—Buckwheat flour, 1 qt; Indian meal, 1 teacupful; yeast, ½ teacupful; molasses, 2 tablespoonfuls; salt, 1 teaspoonful; milk or water.

Mix one quart of buckwheat flour, a teacupful of Indian meal, half a teacupful of yeast; two tablespoonfuls of molasses, and one teaspoonful of salt, in enough warm water or milk to make a thin batter. Beat thoroughly, and set to rise over night in a warm place. If the batter is at all sour in the morning, stir in a teaspoonful of soda or saleratus dissolved in a little hot water. These are the best kind of buckwheat cakes.

Quick Cakes.—*Take:*—Buckwheat flour, 3 pts; warm water 1 pt; soda 1 teaspoonful; cream tartar, 1 teaspoonful.

Take three pints of buckwheat flour; one teaspoonful of soda dissolved in a pint of warm water; mix thoroughly, and then add one

and a half teaspoonfuls of cream tartar dissolved in a few spoonfuls of hot water. Stir together, adding a little warm water, and fry immediately Use salt pork to grease the griddle.

BUDDING. *—Budding consists in introducing the bud of one tree, with a portion of bark and a little adhering wood, beneath the bark of another, and upon the face of the newly forming wood. It must be performed while the stock is in a state of vigorous growth. An incision is made lengthwise through the bark of the stock, and a small cut at right angles at the top, the whole somewhat resembling the letter T., Fig. 1.

Fig. 1.

Fig. 2.

A bud is then taken from a shoot, of the present year's growth, by shaving off the bark an inch or an inch and a half in length, with a small part of the wood directly beneath the bud. Fig. 2.

The edges of the bark, at the incision in the stock, are then raised a little, Fig. 3, and the bud pushed downwards under the bark. Fig. 4.

Fig. 3.

Fig. 4.

A bandage of bass, corn husk, or other substance, is wrapped round, covering all parts but the bud. The pressure should be just sufficient to keep the inserted portion closely to the stock, but not such as to bruise or crush the bark. Fig. 5.

Fig. 5.

The shoots containing the buds should be cut when so mature as to be firm and hard in texture; they are usually in the best condition after the terminal bud has formed.

To prevent withering, the leaves must be immediately cut off, as they withdraw and exhale rapidly the moisture from the shoot. About one-quarter of an inch of the foot-stalks of the leaves should remain, to serve as handles to the buds while inserting them. Fig. 6.

After being thus divested of leaves, they may be safely kept and be sent hundreds of miles in damp moss. or enclosed separately in thin oil cloth.

Fig. 6.

Fig. 7.

When, by growth of the stock, the bandage cuts into it, usually in ten days or more, it must be removed. The bud remains dormant till the following spring, when the stock is cut off two inches or more above it, before the swelling of the bud. If cut closer, the end of the stock becomes too dry, and the bud often perishes. All other buds must be then removed, and all the vigor of the stock or branch thrown into the remaining bud, which immediately commences a rapid growth.

To secure a straight and erect tree, the new shoot when a few inches long, is tied to the remaining stump of the stock. Fig. 7.

* The directions in this article on budding are selected from "*The American Fruit Culturist*," an excellent and comprehensive work by John J. Thomas, published by Wm. Wood & Co., New York.

By another month, if the operation be well performed, no further support will be needed, and the stump may be wholly cut away and the wound allowed to heal by the rapid formation of new wood. *See* GRAFTING.

BUFFALO.—The meat of the buffalo ranks very high as food, but as it can be obtained only by hunting the buffalo on the plains of the far West, it is not often found in the Eastern markets. In the Western markets it appears more frequently, and during December and January can generally be obtained in the larger cities. The flesh resembles that of beef, but is darker and coarser, and the fat is solid and reddish. Like all game, buffalo meat is better if it is kept for some time after killing before it is eaten; and like the meat of all large animals is better roasted than cooked in any other way. It makes excellent steaks, however, and the best way to cook these is to broil them, Indian fashion, on the coals without any gridiron or other utensil. Cooked thus they are even more juicy and savory than venison. Buffalo tongue, when properly cured, is also an excellent dish; the brains are often eaten raw by hunters; and the marrow bones are greatly esteemed, especially when roasted. Buffalo meat is cooked and served in the same way as venison.

BUFFALO ROBE.—The skin of the buffalo, dried with the hair on. It is very warm and pleasant to the touch, and is much esteemed by travellers; but it is cumbrous and expensive.

BUGS.—How to Destroy. This term properly includes the numerous tribes of Hemipterous insects, but it is commonly applied to that worst of household pests, the *bed-bug*. It is difficult alike to prevent bed-bugs from getting into a house, and to get them out when once they are in. They are very partial to certain kinds of wood, and sometimes are fairly built into the house; or they may be brought in from outside in boxes or baskets, in clothes, or by the hired girl. So prolific are they too, that two or three females "stock" the entire house in one season if undisturbed. The best weapon for fighting them is the most scrupulous and vigilant cleanliness. All beds and bedsteads should be examined at least once a week in summer, and if any traces of bed-bugs are found, the bedstead should be taken to pieces and washed thoroughly with cold water and soap, applied with a scrubbing brush. This is the only way to destroy the eggs which are deposited during the summer in every crack and crevice: and unless these are destroyed the bugs will increase in number, no matter how many are killed.

After the scrubbing, the different parts of the bedstead should be washed over with spirits of turpentine: and if this proves ineffective, an ounce of corrosive sublimate, mixed in half a pint of alcohol, or quicksilver beaten up with whites of eggs, may be used. Both these last, however, are deadly poisons, and should be cautiously used if at all. The "Persian Insect Powder," which is harmless to man, but certain death to all insects, is the best bed-bug poison yet devised; but it is not easy to procure an unadulterated article. It should be sprinkled plentifully in every chink and crevice. A solution of *potash* is also good, and some recommend highly simple kerosene oil; others declare salt and water to be unequalled. We shall presently give a recipe for bed-bug poison which may be relied on, but there are one or two points to be mentioned first. Bed-bugs do not confine their attention to beds, but make a home in the walls, behind mantel-pieces, and wherever they can find a congenial crack, and they must be warred upon here no less vigorously. If there be any cracks in the wall-paper they should be carefully pasted over with fresh paper; or if the paper has become loose from the wall at any point, that also should be again made fast. Bugs love to harbor in plaster work; but unless the paper be broken loose they cannot make their way through it. If it be suspected that they are secreted under the surface, they should be shut in by pasting strong brown paper over the chink between the board and the floor.

It is one of the discouragements of fighting bed-bugs that one never knows when the victory is secured. Just when they seem to have been utterly destroyed, they will make their appearance again in scarcely diminished numbers; and, as we have said, one or two bugs will produce hundreds in a single summer. The only plan is to keep constantly on the lookout for them, to keep the bed and its surroundings scrupulously clean, and to have some reliable preparation ready to hand.

Bed-bug Poison.—Spirits of wine, half a pint: spirits of turpentine, half a pint; crude sal-ammoniac, 1 oz: corrosive sublimate, 1 oz; camphor, 1 oz. This mixture should be injected into the joints of the bedstead with a syringe, or a sponge fastened on a stick: all the rest of the woodwork should be washed with it.

BULBS.—Bulbous plants produce some of the best known and most beautiful flowers in our gardens, and are extremely easy to cultivate. The peculiar nature of the bulb is not generally well understood; it really partakes more of the properties of a seed than of a root, for when in the act of vegetating it sends down into the soil roots, and into the air a living stem, and the substance contained in the bulb decomposes and nourishes the young plant. But the bulb is removed, and from the roots another bulb is composed which appears to be the same one planted, yet it is its offspring, and the offshoots or young bulbs are its suckers and are distinct from the parent bulb. The *Spring Flowering Bulbs* are the flowers of spring, and embrace the Snowdrop, the Crocus, the Hyacinthe, Tulips, Daffodils, Jonquils, Narcissus, Anemones, Lily of the Valley, and the Ranunculus. They should be planted in October or November, and before the frost is fairly out of the ground in the spring they shoot up their green and well-sheathed stems, blooming in March and April. Bulbs that can be preserved in the house in a dry state during the winter and

bloom in the house, are called *Summer Bulbs*. To this class belong the Japan Lily, Gladiolus, Dahlia, Tuberose, Tigridia, Amaryllis formosissima, Vallota, and Tritoma. They should be planted in early spring (April or May), and they will bloom, most of them, from July to October. Besides these there are two families of bulbous plants, excellent for indoor culture, known as *Cape Bulbs* and *Dutch Bulbs*.

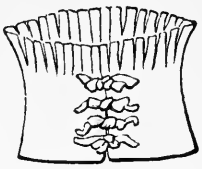
Most bulbs may be dug up, dried, and kept in the cellar, in a box of sand, during the winter. Further directions will be given under the names of the special flowers (*see* DAHLIA, GLADIOLUS, TUBEROSE, &c.). A very beautiful ornament can be secured by planting bulbs in a vase, as shown in the cut. Each bulb must be so planted that its stem will come out through one of the holes in the vase.

BULLOCK. (*See* BEEF.)

BULL-TROUT.—A large kind of sea trout, not very delicate or palatable, and seldom seen in our market. It is also called *Gray-trout*, from its light silvery color.

BUNS.—*Take:*–Flour; butter, 1 tablespoonful; boiling water, ½ pt; home-made yeast, ½ teacupful; eggs, 2; sugar, 1 teacupful; dried currants, 1 teacupful; nutmeg; milk, ½ pt.

Put a tablespoonful of butter in half a pint of boiling water; when melted add half a pint of milk, half a teacupful of yeast, half a tea spoonful of salt, and flour enough to make a stiff batter; mix this at night and set to rise till morning. In the morning add two eggs mixed with a teacupful of fine white sugar; beat the whole together, and add enough of flour to make a dough; add one teacupful of dried currants, and a sprinkle of nutmeg, and set away to rise



Paper Basket for Buns.

until time to bake for tea. Then make the dough into small cakes, place them close together in the pans, and let them rise again until very light. Bake them about half an hour. When done brush the buns over with a mixture of a teaspoonful each of milk and molasses, and set them in the oven for two or three minutes to dry.

Bath Buns.—*Take:*–Flour 1 ½ lbs; butter, ¼ lb; milk, ½ pt; home-made yeast, ½ teacupful; loaf sugar, ¼ lb; eggs, 4; citron, 1½ oz; caraway seed, ½ oz.

Rub a quarter of a pound of butter into a pound and a half of flour, adding a pinch of salt. Mix half a pint of *warm* milk with half a teacupful of yeast; pour into the middle of the flour, cover it, and set before the fire to rise; when risen add a quarter of a pound of crushed loaf sugar, half an ounce of caraway seeds picked and washed, four eggs well beaten, and an ounce and a half of candied citron cut in thin slices. Make up the buns, lay them on baking tins, and let them rise again until quite light. Bake them in a quick oven: when done, brush them over with beaten egg and sift sugar over them.

BUNIONS.—Bunions, like corns, are occasioned either by the wearing of shoes which are too narrow and too short, or too large and badly fitting, or made from leather that is hard or unyielding to the foot. Shoes and stockings are the cause of all bunions, and the first step in the remedy is to so construct and adjust them as to avoid the evil. The common plan of soaking bunions in warm water and then paring them will not prove effective unless the paring is very smoothly and carefully done. Scraping with a sharp knife is better than paring, and should be continued until the skin feels soft and flexible. A good plan to soften the hardened skin is to dissolve a piece of ammonia of the size of a pea in an ounce (two tablespoonfuls) of water and apply hot. It must be remembered, however, that there is no cure for bunions except the wearing of smoothly fitting stockings, and shoes which do not rub upon the spot.

BUREAU. (*See* FURNITURE.)

BURGUNDY.—The choicest wines of the ancient province of Burgundy in France are

among the richest, most aromatic, and delicately flavored in the world. They are imperfectly known in this country, but if properly bottled they can be brought over in good condition, and it is to be hoped they will become better known especially in our sick rooms. The Burgundy wines are of two kinds *white* and *red*. The red is much the finer of the two, but the best of these rarely leave France. The first in quality of the red wines is the *Romanée Conti*, but this is not easy to get even in France; the next in order of excellence are *Clos Vougeot*, *Chambertin*, *Pomard*, *Nuits*, *Volnay*, and *Beaune*. The Mâcon wines are lighter and of a lower grade. The higher grades of Burgundy should be drunk at the temperature of the room, never iced. High grade Burgundies will keep for from twenty to thirty years, or even longer, while the lower grades are best at the age of from five to ten years. Burgundies are often served in a cradle. (*See* CRADLE.)

The white Burgundies are smaller in number and inferior in quality to the red; but some of them rank very high for their fine flavor, as the *Chablis*, *Mont Rachet*, *La Goutte d'Or*, and *Les Charmes*.

Burgundy is recommended to invalids as a light, mildly stimulating, but highly tonic drink. It should always be drunk a trifle warmer than the temperature of the room; and should be served in a cradle. (*See* CRADLE.)

BURNS.—The treatment of burns is of the most delicate and difficult character, and unless the wound is very slight the doctor should be at once sent for. As, however, prompt action is very important, there are a few points which every member of a household should understand. And first the amount of pain suffered is no index to the severity of the wound; on the contrary, in really severe and dangerous burns, the shock to the nerves is so great that very little pain is felt, and its presence is rather of good omen than otherwise. The absence of suffering must be taken as an indication of extreme and imminent danger. In the next place the probable result of a burn will depend upon the part injured and the extent of surface which has been burned. Thus severe burns about the chest and abdomen, especially in children, are almost always fatal; and burns of the lower extremities are more dangerous than the same injuries affecting the face, neck or arms. A deep burn, too, which may involve the loss of a limb is not so likely to prove fatal as a comparatively slight wound covering a large part of the body's surface.

Treatment.—The treatment of burns in the first stages should consist of moist and warm applications. Dry flour is very good and may be sprinkled over the wound if it be slight, or if nothing better is at hand. Raw cotton, or wadding in sheets, such as is used in ladies' dressing, may be laid on and should be used freely enough to entirely exclude the air. Moist applications are best used warm. Wet a piece of old linen or cotton cloth in a mixture of equal parts of lime-water and linseed oil, shaken well together, and apply it to the injured part; cover this with another *dry* cloth and secure it with a bandage. If the mixture of oil and lime-water is not at hand the wound may be covered with castor oil. Or a paste may be made of powdered chalk and lard spread half an inch thick on suitable cloths, and applied to the parts, and covered with an outer bandage; this should be allowed to remain on two or three days. Or in cases of severe injury the parts may be brushed with turpentine, and then covered with a mixture of equal parts of turpentine and resin ointment, spread on linen or wadding. An excellent application is hot water and milk (equal parts), with a teaspoonful of carbonate of soda. A bread-and-milk poultice serves the purpose very well. If the milk is not at hand use warm water with plenty of soap in it; and if you have no soap use plain warm water with carbonate of soda, or a little piece of common washing soda, not larger than a small hazel-nut, to a pint of water, dissolved in it. Whatever is applied, keep the parts thoroughly wet and well covered. The first dressing of a burn should remain undisturbed for at least twenty-four hours, or longer, and then be repeated in a similar or modified form. In after dressings larger surfaces must not be exposed to the air; either leave a thin covering and wet it with the lotion, or if you are using an ointment, remove only a small portion of the dressing at a time, have everything in readiness, and cover again as quickly as possible. It must be borne in mind, however, that the treatment of severe burns cannot prudently be ventured upon without medical advice. When the burn is very serious the chief danger is from the sufferer sinking under the shock; it will be necessary, therefore, to support his strength with wine. If there be much pain and fretfulness, you may safely give to an adult thirty drops of laudanum in a little water, and repeat this in an hour, or a third time if needful. A child ten years of age may take three drops of laudanum in like manner; younger children had better not have any, except upon a physician's prescription.

Chemical Agents sometimes come in contact with the skin. If lime get on the front of the eye or under the eyelid, wash it well with weak vinegar and water. If oil of vitriol, or any strong *acid* has caused the burn, apply at once lime-water, chalk or whiting and water, carbonate of soda or common washing soda and water; in the absence of these use common soap made into a thick batter with soft water; olive oil may afterwards be used freely. *Alkalies*—as quicklime, potash, or caustic ammonia—need the opposite treatment; weak vinegar, or much diluted acids, should be at once applied. *Corrosive sublimate* is rendered inert by the free application of white of egg. *Butter of antimony*, by water in abundance.

BURNING FLUID.—A mixture of oil of turpentine and alcohol for illuminating purposes. Its simplicity, cleanliness, and great

brilliancy of light have made it very popular when gas is not to be had; but owing to the large proportion of expensive alcohol which must be used in making it, it is a very costly illumination, and the great danger which attends its use should banish it from the household. Both alcohol and oil of turpentine are very volatile; that is, when exposed to the air or not confined, they rapidly evaporate or rise into the gaseous state. The vapor thus thrown off is not only inflammable but explosive; and being generated also inside the reservoir of the lamp while burning, the lamp itself is liable to explode at any time. The only lamp in which *burning fluid* may be used with safety is *Newell's lamp*, made especially for this purpose on the principle of Davy's safety lamp, and mounted with fine wire gauze. Even then the can for holding the fluid should have a sheet of the gauze inserted under the lid, and another fixed in the spout.

BURNOUS.—The burnous or Arab cloak is made by taking 3 yds. of yard-wide material, folding it in halves for the *middle of the back* (Fig. 2), fastening it at *b* for the back of the neck, from which point the curved line *b a* indicates the cutting out; this is longer than is needful to meet around the neck, because

FIG. 1

Burnous made up.

the cloak is designed to fold loosely across the breast. The extra fulness in the back will then drape itself into a very long graceful hood, which requires a heavy tassel at *d*, (Fig. 2.) and may be sewed up from *d* to *b*, or left open and lined with silk. In Fig. 1, the burnous is represented with a hood which can be drawn over the head; this is made by cutting the cloak and hood apart following a diagonal

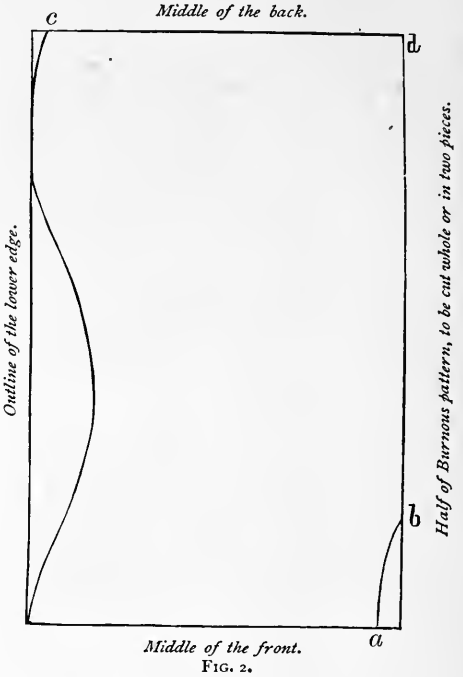


FIG. 2.

from *b* to *c*, (Fig. 2.) The cloak has then a seam in the back, and the hood is shaped according to taste.

BUSH-BEAN.—The common low, garden-bean, growing on small bushes, and sometimes called *kidney bean*. For cultivation (*see* BEAN). In cooking, shell into cold water and boil until tender. A small piece of fat bacon boiled with them is an improvement to them; if this is used do not add any salt.

BUTTER.—Butter is the oil of milk separated by the process called "churning." It is the most popular and delicate of the class of animal fats, and its dietetic properties are nearly the same as those of vegetable oils, though it becomes rancid sooner than most other fats or oils. When fresh and pure it is very wholesome; but it should be quite free from rancidity. If salted when quite fresh its wholesomeness is probably not at all impaired thereby; but should it begin to turn rancid no amount of salting can correct it. The flavor of butter depends very much upon the food of the cows from which it is produced; and for this reason cows whose milk is to be used for making butter should have liberal pasturage, and if fed should be given only simple, pure, and nutritious food. Good butter will not adhere to the knife when it is cut. The greatest fault of American butter is that it is too much salted —it has been estimated that every ten pounds of butter sold in the United States contains one pound of salt, or more than three times

what the average would be in England. It is also adulterated with mutton fat, lard, and the vegetable butters. All these, however, are harder than butter, and cannot be perfectly mixed with it, so that it is not very difficult to detect their presence by close examination. All butter bought at the stores should be worked over thoroughly before using, not only to purify it, but to preserve its freshness.

To Make.—Butter is made either with the cream alone or with the milk and cream together; the former plan is said to produce the best butter, and the latter the largest quantity. In both cases the process is pretty much the same, though the churning of cream alone is the method usually adopted in this country, and the cream should be sour before it is taken from the milk. The first requisite in the making of good butter is perfect *cleanliness* in all the utensils connected with the operation. All strongly-flavored substances must be kept from the neighborhood of the milk, the pans should be scalded just before the milk is put into them, the cream should be kept in a stone jar or crock, and the churn should be scalded before using and then cooled with ice or spring water. In hot weather it is important to keep the milk, cream, and butter as cool as possible; for this purpose those who have no ice-house or very cool milk-room should hang the cream down the well. In winter the temperature of the cream before the churning begins should be about 60° and the churn should be scalded, so as not to cool the cream. Any warming of the cream before churning should be very gradual. When the cream or milk is ready, churn steadily until the butter-flakes begin to show around the dasher on the top of the churn, then move slowly. The motion should always be steady and regular, otherwise the butter is longer in coming. In warm weather, if the butter is slow in coming, pour a little cold water into the churn. When the butter has come, take it up on the dasher and put it into a wooden bowl or tray containing very cold water; then pour off the cold water, squeezing and pressing the butter with a wooden ladle. Set the butter away in a cool place to harden, and then work it over and over until every drop of buttermilk has been extracted and the butter is yellow and solid; throughout the process use the wooden ladle and do not touch the butter with the hands. When the buttermilk is all worked out it is time to add the salt; on this no precise direction can be given as tastes differ so much; a good plan is to notice the proportions which are most agreeable, and thereafter go by this measure. Mould the butter into rolls or "pats" of the desired size; wrap each in a perfectly clean linen cloth; and pack in a stone jar, sprinkling a little salt between the layers. Butter packed thus will keep sweet and fresh for several weeks.

To Preserve.—If butter is to be kept a long time it should be worked with especial care and packed down hard in a perfectly clean stone jar or firkin; if the firkin is used, it should be thoroughly seasoned and the bottom covered with salt and the sides rubbed with it. The butter may now be covered with a strong brine; but a better way is to press a fine linen cloth closely to the surface, and cover this with a layer of fine salt, and a closely-fitting lid. When butter is taken out, the cloth and lid should be carefully replaced; it is best to take out enough to last a week as it spoils the butter to let air in upon it every day.

Butter may be kept for a year or more by mixing into it a preparation made of two parts of fine salt, one of sugar, and one of saltpetre, in the proportion of one ounce of the mixture to a pound of butter. Pack away so as to entirely exclude the air.

Butter may be preserved without salt by mixing honey with it in the proportion of an ounce to a pound of butter. This has an agreeable taste, will keep for years, and might be useful on long journeys; but as the portion of honey is considerable it might not agree with some constitutions.

To Restore.—Rancid butter may be restored thus: Put fifteen drops of chloride of lime to a pint of cold water, and work the butter in it till every particle has come in contact with the water; then work it over in pure cold water.

BUTTER (Drawn). (*See* BUTTER under SAUCES.)

BUTTERMILK.—This is the residue of the milk and cream after the butter has been made, and contains about two-thirds of the whole original weight. When quite fresh it differs from whole milk chiefly in the absence of the butter or oily part; but it retains the sugar, caseine, and salts of milk. It is very nourishing, and being easier of digestion than whole milk, it is sometimes recommended for invalids; and as it is extremely cooling, it forms a useful and pleasant beverage in warm weather. When kept for a day or two buttermilk acquires an acidity; but the acid of buttermilk does not increase the acidity of the stomach, or cause flatulence, as vegetable acids commonly do, and it may therefore be safely used by dyspeptics. In this state it is refrigerant, and should not be drunk while the body is unusually warm. Where cream alone has been churned the buttermilk is particularly rich and agreeable. Buttermilk cannot always be procured in the cities, but it is easily made in small quantities by shaking sour cream in a bottle, or beating it in a crock until "the butter comes." Do not keep buttermilk in glazed stoneware.

Fleetings (Buttermilk.)—When buttermilk is added to boiling whey, and the two are well mixed, a soft curd is thrown down, which is excellent when eaten either hot or cold with bread.

Thickened Buttermilk.—If buttermilk be put into a linen bag and all the whey strained off, what remains is then much thicker, and, eaten with sugar and cream, is excellent.

Whey (Buttermilk.)—This is a nice drink for the sick. Put one quart of buttermilk in a pan on the fire; when it boils up beat up the

yolk of an egg and stir in; add a half teacupful of cream or a tablespoonful of butter. Then beat the white of the egg to a stiff froth and stir it in. Sweeten to taste, and add spice if liked.

BUTCHER-MEAT.—Each of the different kinds of animals slaughtered for human food is cut up differently in the shambles, and the various joints of each are called by different names; it would not be easy, therefore, to treat them all under one head. For full details as to joints, etc., *see* separate subjects, as BEEF, MUTTON, PORK, VEAL.

BUTTERNUTS.—A species of the walnut, resembling, when young, the common black walnut, but longer and smaller. In the Eastern States they are known as *oil-nuts*, and in Ohio and neighboring States as *white walnuts*. When ripe, butternuts are of an oval shape, not quite so large or rough as the black walnut, and are of a different flavor, with an agreeable taste, and rich in oil. When green and soft they are excellent for pickling. They ripen in September.

BUTTON-HOLES.—For cutting button-holes there is a special kind of scissors, made for the purpose, which are much better than the ordinary kind; it is best not to cut the hole to full size at first, but to lengthen it if it prove too small on trial. For broadcloth, cut the buttonhole with a chisel, on a board. The best stitch is made by turning the thread round the needle before it has been drawn entirely through; this is better than to draw the needle through and then take up the loop. A stay thread should first be put along each side of the buttonhole, and a bar (or cross thread) at each end before working it; in working the buttonhole keep the stay thread as far from the edge as possible. A small bar should be worked at each end to add to its durability.

C

CABBAGE.—Properly speaking the cabbage embraces a very numerous tribe of vegetables used as food, such as the different kind of Kales, Brussels sprouts, broccoli, cauliflower, spinach, water-cress, etc.; but we shall restrict the name here to the common cabbage (*Brassica*). Even of this there are so many varieties that one or other is procurable at nearly every season of the year. In his book on *Foods*, Dr. Smith says that the cabbage "represents the least nutritious class of vegetable foods, and is perhaps less valuable for its direct nutritive elements than for its indirect and medicinal saline juices;" but it is nevertheless a most agreeable and useful adjunct in its season. The young cabbages appear in the Southern markets in May or June, and are brought thence to the North; the season in the Northern markets begins in July, and lasts till cold weather. When frost comes if the heads be cut off and put into a cellar, or buried under ground, they may be kept the entire winter. If left exposed, cabbages putrify very quickly, and in decomposing give out a very offensive odor, owing, it is supposed, to their containing a small portion of nitrogen in addition to the usual constituents of vegetables. Decayed cabbage leaves should therefore never be allowed to lie in the vicinity of dwellings; and the water in which cabbage has been boiled should not be suffered to stand, but passed off at once into the drains. Care must be taken to have cabbage thoroughly cooked, or it will derange the stomach and cause flatulence. To raise cabbage requires a deep and moderately rich garden soil. In order to have a regular succession, the seed should be sown at different times, from the beginning of spring till the autumn; the early sown will run to seed the same year, the later sown will produce larger and firmer heads and will not go to seed till the next season. Cabbage should be started first in a seed-bed; when they are intended for early produce, they should be planted in the fall and protected by glass frames. In this manner strong plants may be had early in the spring, which, planted out in April, will produce fine cabbage in July or August. Set out in rows 18 inches apart, and the plants two feet from each other. Those which are raised on a large scale should be sown in a seed-bed in March, and planted where they are to remain in June. When they are picked out from the seed-bed very young, and allowed to grow to a good size in a piece of ground prepared for that purpose, before being finally transplanted to the field, the success is more certain, and will repay the additional trouble. These come to perfection in the autumn, and may be cut as they are wanted. Some kinds are so hardy that they will stand the severest frosts and remain covered with snow for a considerable time without damage; but the better sort for table purposes should be cut and packed away in the cellar, or buried underground, when cold weather comes on. Cabbages are subject to a peculiar disease called *clubbing* when planted repeatedly in the same ground; the bottom of the stem enlarges and the heads never come to perfection. The only remedy for this disease is to change the cultivation, and for a time to plant no cabbage on the ground which produced the clubbed plants.

Boiled Cabbage.—Pick off the outer leaves, cut in quarters, and examine carefully for insects. Soak for an hour in cold water; then put into a pot with plenty of boiling water, a teaspoonful of salt, and a level saltspoonful of bicarbonate of soda, which destroys the oil of cabbage. Allow it to boil twenty minutes, free it from the water, serve it with butter sauce, bechamel, allemande, or *fines herbes sauce.*

Boiled, with Bacon.—Proceed as described on the preceding page; allow the cabbage to boil ten minutes; finish cooking it in the broth which the bacon made in cooking; be careful to preserve its shape as much as possible while draining it from the pot; dish it, lay the bacon on in slices, and serve.

Fried Cabbage.—Take cold boiled cabbage, cut it up fine, add a little melted butter and salt and pepper to taste, with three or four tablespoonfuls of cream. Put it into a buttered frying-pan and stir until it is very hot; then let it stand long enough to brown slighly at the bottom. Turn out into a dish, and serve hot.

Pickled Cabbage.—Cook as above, but not too much; take it off as soon as it is done, and drain thoroughly; drop it immediately into cold water and drain again. When dry, put it into jars and cover with boiling vinegar; season with rock salt, pepper, pepper-corns, and cloves. When perfectly cold, seal the jars up air tight, and set away in a cool, dry closet.

Salad (Cabbage).—Choose a hard clean head of red cabbage, peel off the outer leaves, and cut it in four pieces. Then with a sharp knife cut across the grain in as thin slices as possible; put it into a crockery dish, cover with vinegar, sprinkle salt and pepper over it, and leave to stand several hours. Then throw away the vinegar, and dress with oil and vinegar. (*See* SOUR KROUT.)

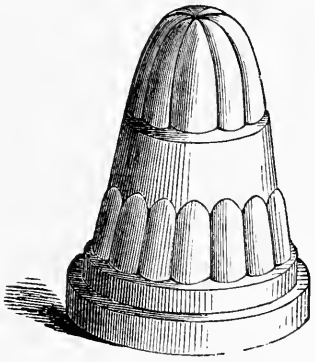
Stewed Cabbage.—Boil a large head of cabbage, drain, and cut it up very fine. Put two tablespoonfuls of butter in a sauce-pan on the fire, and when it has melted put in the cabbage and stir for five minutes; add salt and pepper to taste, and a pinch of flour; wet with a pint of broth and stew until the sauce is reduced. Serve hot.

CABBAGE ROSE. A species of rose having a thick compacted flower with petals arranged like the leaves of a cabbage. It is hardy, and very pretty. Its culture is like that of other hardy roses. (*See* ROSE.)

CACTUS.—The families of the cactus are numerous, and each has a great number of species. Those chiefly grown for parlor and garden plants come under the families of Cereus and Epiphyllum. Both should be planted in pots with a soil consisting of two parts peat, one part broken potsherds, one part loam or old mortar rubbish, and one part manure; mix these well together and see that the drainage is good. During the summer the plants should stand out of doors, in a sheltered place. In September remove to the house, all parts of the shoots having no bloom buds (which may easily be seen along the leaves) being first cut back to just beyond the buds. It is better to confine the plant to six or eight strong stems, and while these are in good health the growth of shoots from the root is not to be encouraged. Give the plants no water from September to February; while in growth in summer, water moderately. The cactus blooms from May to August. The difference between the *Cereus* and the *Epiphyllum* is that the shoots of the latter have flat shoots and leaves without spines, while in the former the shoots are round and the leaves prickly. The best varieties of the *Cereus* are: *C. Speciosissimus*, crimson and purple flowers (this is the best for general cultivation); *C. Grandiflorus*, flowers yellowish white (this is the "night-blooming cereus"); *C. Maynatdi*, deep orange red flowers; and *C. Triangularis*, immense cream-colored flowers. The best varieties of the *Epiphyllum* are: *E. Akenuanui*, fine scarlet flowers; *E. Speciosum*, rosy pink flower; *E. Alatum*, white flowers; and *E. Trincatum*, and its varieties, with white, red, scarlet, rosy, and violet flowers.

CAFÈ AU LAIT.—Coffee and milk, for breakfast. Strain the coffee, while hot, off the grounds through a piece of fine muslin, into the coffee-pot; add an equal quantity of *boiling* milk that has been boiled down one-half. Serve like plain coffee, with sugar.

CAKE.—It is absolutely essential to the making of good cake that the materials should be good; the flour must be white and dry, and carefully sifted before using; the sugar white and free from lumps; the eggs above suspicion; the butter sweet and fresh; and the milk whole or unskimmed. It is hardly less important that the measuring and weighing should be accurate throughout; and that each step in the process of mixing should be rightly taken.



Modern Cake Mould.

The flour, as we have said, should be sifted *before* measuring, and if damp dried thoroughly. The eggs should be beaten separately,—the whites in a cool room till they are solid enough to slice. The milk may be used either sour or sweet, but the two must never be mixed; sour milk makes spongy cake, sweet makes it more solid. Saleratus and soda should be thoroughly dissolved in hot water and strained before they are stirred into cake. Currants should be carefully rinsed, rubbed in a dry cloth to get out the stems, and then spread on platters and dried, before being used. Almonds should be blanched, by pouring boiling water

on them; drain and repeat the process and they will readily pop from the skin; when blanched, dry and then pound them fine with a few drops of milk, to prevent their oiling. All kinds of cake that are made without yeast are better for being stirred till just before they are baked. When ready to mix, stir the butter to a cream, then add the sugar, and stir till white; next beat the yolks of the eggs, strain them and add them to the sugar and butter; meantime another person should beat the whites to a stiff froth and put them in; then add the spices and flour, and last of all the fruit, if any be used. Earthenware is best to mix in, and a wooden spoon should be used. Butter the cake-pans well; the cake will be less liable to burn if the pans are lined with white buttered paper. The oven should be "quick" but not furiously hot; if it be slow the cake will not rise properly. The cake must not, while baking, be moved, or changed from one oven to another, and if it browns too rapidly on top, cover it over with a piece of white buttered paper. To find out when it is baked enough, half open the oven door, and try the centre of the loaf with a clean broom-straw. If the cake is baked the straw will come out dry, if not, a little of the batter will adhere to it, in which case the door of the oven must be closed immediately, or the cake will fall. Cake that is to be frosted should be cooked in pans with sides perpendicular, instead of slanting. It should be iced as soon as taken from the oven, to ensure its drying quickly and smoothly. As soon as the cake is cool, wrap it in a thick white cloth, and keep it in a covered earthen jar or tight tin box. Do not cut more at a time than is likely to be used. (*See* CRULLERS, DOUGHNUTS, MACCAROONS).

Almond Cake.—*Take:*-Sugar, 1 lb; butter, ¼ lb; flour, 1 lb; eggs, 8; almonds, 1 coffeecupful; essence of bitter almonds, ½ teaspoonful; brandy, 1 wineglassful.

Stir one pound of powdered sugar and a quarter of a pound of butter to a cream; beat up the eight eggs, the whites and yolks separately, and add the yolks to the butter and sugar; stir together very thoroughly, and then put in one pound of flour; add a coffeecupful of sweet almonds blanched, and beat to a smooth paste, with half a teaspoonful of essence of bitter almonds; along with the almonds stir in the whites of the eggs; finally add a wineglass of brandy. Bake in a quick oven, and frost it as soon as it is done. Season the icing with rosewater.

Almond Cheese Cake. — *Take:*-Milk, 1 pt; eggs, 6; white sugar, 6 oz; sweet almonds, ½ lb; butter, ¼ lb; wine, ½ wineglassful; rosewater, 1 teaspoonful.

Boil a pint of new milk; beat three eggs and stir them into the milk, while it is boiling. When it boils up, take it from the fire, add half a wineglass of wine (any cooking wine); separate the curd from the whey, and add to the curd three eggs and six ounces of powdered white sugar that have previously been beaten together; add a teaspoonful of rose-water, half a pound of sweet almonds blanched and pounded fine, and a quarter of a pound of melted butter. Mix well together, and pour it into small pans that have been lined with pastry; ornament the top with Zante currants and almonds cut in thin slices, and bake immediately in a rather quick oven.

Bannock, or Indian Meal Cake.—*Take:*-Brown sugar, 1¼ lbs; butter, 1 lb; eggs, 6; cinnamon or ginger, 1 teaspoonful; Indian meal, 1¼ lbs; flour, ¼ lb.

Stir a pound of butter and a pound and a quarter of brown sugar to a cream; beat six eggs, and mix them with the sugar and butter; add a teaspoonful of cinnamon or ginger; stir in a pound and a quarter of white Indian meal (sifted), and a quarter of a pound of wheat flour. Mix thoroughly, and bake in small cups, and let it remain in them till cold.

Berwick Sponge Cake.—*Take:*-Flour, 4 teacupfuls; eggs, 6; powdered sugar, 3 teacupfuls; cream-tartar, 2 teaspoonfuls; soda, 1 teaspoonful; cold water, 1 cupful; lemon, the rind and juice of ½. Beat six eggs two minutes; add three cups of powdered sugar, beat six minutes; two cups of flour with two teaspoonfuls of cream-tartar, beat one minute; one cup of cold water with a teaspoonful of soda, beat one minute; half the grated rind and juice of a lemon, two more cupfuls of flour and a small pinch of salt; stir gently; bake twenty minutes.

Black Cake. — *Take:*-Flour (browned), 1 lb; brown sugar, 1 lb; butter, a little more than 1 lb; eggs, 10; seeded raisins, 3 lbs; Zante currants, 3 lbs; citron, 1 lb; wine, brandy, and milk, 1 wineglassful of each; molasses, 1 tablespoonful; saleratus, 1 teaspoonful; cinnamon, 1 tablespoonful; cloves, 1 teaspoonful; mace, 1 tablespoonful, or 1 nutmeg.

Take one pound of flour, brown it in a pan over the fire, stirring constantly, and let it cool before using; one pound of brown sugar; a little more than a pound of butter; ten eggs; three pounds of seeded raisins; three pounds of Zante currants; one pound of citron; a wineglass of wine, one of brandy, and one of milk; a teaspoonful of saleratus; a tablespoonful of molasses; a tablespoonful of cinnamon; a teaspoonful of cloves; and 1 tablespoonful of mace, or one nutmeg. Stir the sugar and butter together; beat the eggs to a froth, and stir them in; then add the flour, stirring it in gradually; after this the molasses and spice. Dissolve the saleratus in the milk, strain it, and mix with the brandy and wine to curdle them; stir the whole into the cake. Just before putting the cake into the pans, stir in the fruit gradually, a handful of each alternately. When well mixed together, put the mixture into cake pans, and bake immediately in a moderately hot oven. If baked in three loaves it will take from one to two hours. Black cake should be kept three or four weeks before it is cut.

Caraway Cakes. — *Take:*-Flour, 2 qts; white sugar, 1 qt; butter, 1 teacupful; caraway

seeds, ½ gill; essence of lemon, 1 teaspoonful; milk, to make a dough that may be rolled.

Stir one quart of powdered white sugar and a teacupful of butter to a cream; add two quarts of flour, half a gill of caraway seed, and a teaspoonful of essence of lemon; make into a dough, roll out into a sheet half an inch thick, cut into square cakes, and crimp the edges. Then bake in a tolerably quick oven. A piece of sal-volatile, the size of a nutmeg, dissolved in two tablespoonfuls of hot water, improves this.

Children's Cake. — *Take:*–Flour, 2 lbs; butter, ¼ lb; coffee sugar, ½ lb; currants, 1 lb; caraway seed, ½ oz; allspice, 1 tablespoonful; brewers' yeast, 2 tablespoonfuls.

Rub a quarter of a pound of butter into two pounds of flour; add half a pound of coffee sugar, one pound of currants well washed and *dried*, half an ounce of caraway seed, and a tablespoonful of allspice; mix all together thoroughly. Warm a pint of new milk, but do not let it get hot; stir into it two tablespoonfuls of good yeast; with this liquid make up the dough lightly, and knead it well. Line the pans with buttered paper, and put in the dough, set it in a warm place for an hour and a half to rise; then bake in a quick oven. This quantity will make two moderately sized cakes; thus divided they will require an hour or more to bake.

Chocolate Cake. — *Take:*–Flour, 3½ cupfuls; butter, 1 cupful; sugar, 2 cupfuls; eggs, 5; milk, 1 cupful; cream-tartar, 1 teaspoonful; soda, ½ teaspoonful; fine white sugar, 1½ cupfuls; grated chocolate, 3 tablespoonfuls; essence of vanilla, 1 teaspoonful.

Mix together one cupful of butter; two cupfuls of sugar; the yolks of five eggs and whites of two; three and a half cupfuls of flour, into which one teaspoonful of cream-tartar has been stirred; one cupful of milk, and half a teaspoonful of soda. Bake in jelly-cake tins; and use the following mixture for spreading between the layers and on the top: One and a half cupfuls of sugar; the remaining whites of the three eggs; three tablespoonfuls of grated chocolate; and one teaspoonful of essence of vanilla; beat together well.

Cider Cake. — *Take:*–Flour, 6 cupfuls; white sugar, 3 cupfuls; butter, 1 cupful; milk, ½ cupful; nutmeg, 1 (grated); saleratus, 1 teaspoonful; cider, 1 cupful.

Stir together a cupful of butter, three cupfuls of white sugar, two cupfuls of flour, a grated nutmeg, and half a cupful of milk with a teaspoonful of saleratus dissolved in it. Mix all together; and, while doing so, add a cupful of cider, and four even cupfuls of sifted flour. Bake at once in a quick (but not too quick) oven.

Cocoanut Cakes. — *Take:*–Grated cocoanut, 1 lb; white sugar, 1 lb; eggs, whites of 6.

Take a pound each of powdered white sugar and grated cocoanut (the brown part of the cocoanut should be cut off before grating it); add the whites of half a dozen eggs beaten to a stiff froth. There should be just eggs enough to wet up the whole stiff. Drop this mixture on buttered plates in "dabs" the size of a two-cent piece and several inches apart; and bake immediately in a moderately warm oven, watching constantly to keep them from scorching.

II. *Take:*–Flour, 4 cupfuls; sugar, 3 cupfuls; butter, 1 cupful; soda, 1 teaspoonful; cream-tartar, 2 teaspoonfuls; grated cocoanut, 3 cupfuls; eggs, whites of 3; lemon, grated rind of 1.

Mix together three cupfuls of sugar; one of butter; the whites of three eggs; a level teaspoonful of soda; four cupfuls of flour, with two teaspoonfuls of cream-tartar sifted into it; three cupfuls of grated cocoanut; the grated rind of one lemon; and a gill of milk. Stir thoroughly, and bake in a moderate oven.

III. (Sponge.)—*Take:*–Flour, ½ pt; grated cocoanut, 1; white sugar, 1 pt; eggs, 6; salt, ½ teaspoonful.

Stir together a pint of fine white sugar, and the yolks of six eggs, beaten and strained; add one cocoanut (grated), and half a teaspoonful of salt, and the juice of half a fresh lemon; just before the cake is put into the oven, add the whites of the six eggs beaten up stiff, and then stir in half a pint of flour. Stir the flour in only just enough to mix it; then put the cake in pans lined with buttered paper, and bake in a quick oven. Do not let the top harden quickly; if there is danger of it, cover with buttered paper.

IV. *Take:*–Sugar, 1½ cupfuls; butter, ½ cupful; eggs, 3; milk, ½ cupful; flour, 2 cupfuls; cream-tartar, 1 teaspoonful; soda, ¼ teaspoonful; cocoanut, 1; fine white sugar, 1½ cupfuls.

Stir one and a half cupfuls of sugar and half a cupful of butter to a cream; beat up three eggs and add them, together with half a cupful of new milk; then add two cupfuls of flour into which a teaspoonful of cream-tartar and a quarter of a teaspoonful of soda have been sifted. Stir together well, and bake in jelly-cake tins. Mix one cocoanut (grated) and its milk with a cupful and a half of white sugar; set this in the oven till the sugar melts, and spread between the layers of cake.

Coffee Cake.—1. *Take:*–Flour, 2½ lbs; brown sugar, 9 oz; butter, 14 oz; molasses, 1 pt; cold strong coffee, 1 pt; stoned raisins, cut in two, 2½ lbs; citron, 1 lb; mace, cinnamon and ginger, 2 teaspoonfuls each; cloves and allspice, 1 teaspoonful each; soda, dissolved in a little of the coffee, 2 even teaspoonfuls.

Rub the sugar and butter together, add the molasses, coffee and flour alternately, leaving a pint of flour in which to rub the fruit, then the soda, and lastly the fruit. Bake slowly about an hour.

2. *Take:*–Ground coffee, 1 cupful steeped in 2 cupfuls of boiling water; sugar, 4 cupfuls; butter, 2 cupfuls; eggs, 3; soda, 1 teaspoonful; allspice, 1 teaspoonful; nutmeg, ½ (grated); cream-tartar, 2 teaspoonfuls; flour enough to make dough.

Pour two cupfuls of boiling water on a cupful of ground coffee; cover it over tightly, and let it steep an hour; then strain it and let it cool. Beat together four cupfuls of sugar, two of butter, and three eggs; dissolve one teaspoonful of soda in the coffee, and stir this into the sugar and egg; add flour enough to make a soft dough, having previously mixed into it a teaspoonful of allspice, half a nutmeg (grated), and two teaspoonfuls of cream-tartar. Roll it thin with sugar; cut it with a cake-cutter; and bake in a slow oven on tin sheets.

Composition Cake.–Butter, ½ lb; sugar, 1¼ lbs; flour, 1¾ lb; eggs, 4; milk, 1 pt; nutmeg, 1; baking powder, 5 even teaspoonfuls; raisins, stoned and chopped, ¾ lb; currants, ¾ lb.

Beat the butter and sugar together until very light; add alternately, but gradually, the milk and one fourth of the flour; whisk the eggs until thick and add them in the same way with the remainder of the flour with which the baking powder has been thoroughly mixed and sifted; beat well and add the grated nutmeg. Mix the fruit and stir in half at a time. When well beaten put it in pans buttered and lined with paper. Bake at once in a moderate oven. Ice the bottom and sides while hot.

Confederate Pound Cake.—*Take:*–Eggs, 10 large or 12 small ones; butter, 1 lb; powdered sugar, 1 lb; flour, 1 lb. less 1 tablespoonful.

Cream the butter thoroughly and beat in the sugar; add the whites of the eggs, beaten to a stiff froth, and then the well-beaten yolks: put in the sifted flour carefully, stirring only enough to mix well. Bake in pans lined with paper and be careful not to move it while baking.

Cornstarch Cake.—*Take:*–Sugar, 2 cupfuls; butter, 1 cupful; milk, 1 cupful; eggs, 3; soda, 1 teaspoonful; flour, 2 cupfuls; cornstarch 1 cupful; cream-tartar, 2 teaspoonfuls.

Stir two cupfuls of sugar and one of butter to a cream; add one cup of milk, three eggs, whites and yolks beaten separately, and one teaspoonful of soda, dissolved in a little hot water; then stir in two cupfuls of flour, and one cupful of cornstarch, with two teaspoonfuls of cream-tartar sifted through them. Bake in small tins, and eat fresh.

Cream Cake.—*Take:*–Sugar, ¾ lb; butter, ½ lb; eggs, 7; flour, 1½ lbs; brandy, 1 wineglassful; nutmeg, 1; cream, ½ pt.

Take half a pound of butter and three quarters of a pound of sugar, and stir together till very white; beat seven eggs, the whites and yolks separately, and stir them into the cake, then add a wineglass of brandy, a grated nutmeg, and a pound and a half of sifted flour; just before putting it into the pans, add half a pint of sweet cream, and a pound of seeded raisins. Bake in a quick oven.

II. *Take:*–Butter, ½ lb; boiling water, 1 pt; flour, ½ lb; eggs, 14; milk, 1 pt; sugar, 2 cupfuls; flour, ½ cupful; lemon, to taste.

Put half a pound of butter into a pint of boiling water, and let them boil together; stir in three quarters of a pound of flour, then remove from the fire. While hot beat in ten eggs thoroughly one by one. This is the crust. For the cream, take: one pint of milk, four eggs, one cupful of sugar, and half a cupful of flour; boil the milk, and while it is boiling add the sugar, eggs, and flour, and then flavor with lemon. Drop the crust on tins, and bake in a quick oven fifteen or twenty minutes; when they are done open them at the sides and fill with the cream.

III. *Take:*–White sugar, 2 cupfuls; butter, ⅔ cupful; milk, 1 cupful; eggs, 5; cream-tartar, 1 teaspoonful; soda, ½ teaspoonful; flour, 3 cupfuls; cornstarch, 2 teaspoonfuls; vanilla, 1 teaspoonful.

Stir two cupfuls of fine white sugar and two thirds of a cupful of butter to a cream; then add a cupful of milk, four eggs, a teaspoonful of cream-tartar, half a teaspoonful of soda, and three cupfuls of flour. Bake in thin layers as for jelly cake, and when cold spread between them the following cream: stir two teaspoonfuls of cornstarch, wet with a little cold milk, into half a pint of boiling milk; beat half a cupful of sugar and one egg together and add to the milk, let it boil till quite thick, stirring constantly to prevent its burning; when cold flavor with one teaspoonful of vanilla. If icing is used flavor it also with vanilla.

IV. (Without Eggs).—*Take:*–Sugar, 3 cupfuls; butter, 1 cupful; flour, 4 cupfuls; saleratus, 1½ teaspoonfuls; ess. of lemon, 1 teaspoonful; nutmeg, ½ (grated); sour cream, 2 cupfuls.

Stir three cups of sugar and one of butter together thoroughly; add two cupfuls of sour cream, one and a half teaspoonfuls of saleratus dissolved in a little cold water, a teaspoonful of essence of lemon, and half a grated nutmeg; pour all this into the middle of four cupfuls of flour. Mix together quickly and thoroughly, and bake at once.

Cream-Tartar Cake.—*Take:*–Flour, 3 pts; cream-tartar, 2 teaspoonfuls; soda, 1 teaspoonful; nutmeg ½ (grated); milk, 1½ cupfuls; sugar, 1 pt.

Mix two teaspoonfuls of cream-tartar thoroughly with three pints of flour, and add half a grated nutmeg; dissolve one teaspoonful of soda in two tablespoonfuls of hot water, add it to one cupful and a half of milk, and stir in a pint of crushed sugar; use this to mix the flour into a soft dough. Roll the dough out, cut into round cakes with a tumbler, and bake immediately in a quick oven for fifteen or twenty minutes.

Cup Cake.—**I.** *Take:*–Sugar, 2 cupfuls; butter, 1 cupful; eggs, 4; flour, 3 cupfuls; baking powder, 1 teaspoonful; ess. of almond, to taste.

Beat one cup of butter and two of sugar to cream; then add four eggs, whites and yolks beaten separately, and three cupfuls of flour; flavor with almond to taste, and at last, just before putting into the oven, add one teaspoonful of baking powder. Bake in a quick oven, either in cups or pans.

II. *Take:*–Sugar, 3 teacupfuls; butter, 1½ cupfuls; eggs, 3; flour, 6 cupfuls; ess. of

lemon, or rose-water, to taste; saleratus, 1 teaspoonful; milk, 1 cupful.

Stir three teacupfuls of sugar and one and a half of butter to a cream; beat three eggs to a froth, and stir them into the sugar and butter, together with three cupfuls of flour; flavor to taste with essence of lemon or rose-water. Dissolve a teaspoonful of saleratus in a cupful of milk, strain it into the cake, and then add three more cupfuls of flour; with three teaspoonfuls of cream-tartar. Mix well, and bake immediately either in cups or pans.

Currant Cake.—*Take:*–Flour, 1 lb; butter, ½ lb; sugar ¾ lb; currants, ½ lb; eggs, 4; cinnamon, 1 teaspoonful; soda, ½ teaspoonful; ½ a lemon.

Mix together one pound of flour, half a pound of butter, three quarters of a pound of sugar, half a pound of currants (well washed), four eggs, one teaspoonful of cinnamon, half a teaspoonful of soda dissolved in hot water, half a lemon (squeezed and the rind grated). Line the bake-pans with buttered paper; drop the mixture upon it; and bake quickly.

Delicate Cake.—*Take:*–Butter, 1 cupful; sugar, 2 cupfuls; milk, 1 cupful; eggs, whites of 5; cream-tartar, 1 teaspoonful; soda, ½ teaspoonful; flour, 3 cupfuls.

Stir one cupful of butter and two of sugar to a cream; add one cupful of milk, the whites of five eggs, one teaspoonful of cream-tartar, half a teaspoonful of soda, and three cupfuls of sifted flour. The yolks of the eggs can be used for other purposes.

Diet Cake.—Boil one pound of crushed sugar in one and a half gills of water to the crack (see candy); pour it on eight well-beaten eggs, whisking them well the while; beat until the mixture is cold; then add ten ounces of flour, and 4 oz almonds, blanched and cut into thin strips. Bake in a mould lined with paper, 35 minutes, in a moderate oven.

Dover Cake.—*Take:*–White sugar, 1 lb; butter, ½ lb; eggs, 6; milk, 1 cupful; soda, 1 teaspoonful; vinegar, 1 tablespoonful; cinnamon (powdered), 1 teaspoonful; rose-water, 1 tablespoonful.

Stir a pound of white sugar and half a pound of butter to a light cream; add six eggs, beaten to a froth, one cupful of sweet milk, one teaspoonful of soda dissolved in a tablespoonful of vinegar, one tablespoonful of powdered cinnamon, and one pound of flour; flavor with one tablespoonful of rose-water. Bake in a quick oven and frost as soon as done; flavor the frosting with lemon-juice.

Fancy Cake.—*Take:*–Sugar, ½ lb; eggs, 4; flour, ½ lb; ess. of lemon, 1 teaspoonful.

Beat half a pound of sugar and the yolks of four eggs together; add half a pound of flour, and beat up *thoroughly;* then add a teaspoonful of essence of lemon, and the whites of the eggs, beaten to a stiff froth. Bake in small patties, and put a sugar plum on the top of each.

French Cake.—*Take:*–Sugar, 1 lb; butter, ¾ lb; eggs, 12; flour, 1½ lbs; milk, wine, and brandy, 1 gill each; nutmeg (grated), ½; raisins, ¾ lb; citron, ¼ lb; almonds (blanched and pounded fine), ¼ lb.

Mix one pound of sugar and three quarters of a pound of butter to a white cream; add 12 eggs, the whites and yolks beaten separately; then stir in a pound and a half of flour, and a gill each of milk, wine, and brandy; flavor with one half of a grated nutmeg. Just before baking add three quarters of a pound of seeded raisins, a quarter of a pound of citron, and a quarter of a pound of almonds, blanched and pounded fine. Bake in a moderately quick oven.

Fruit Cake.—I. *Take:*–White sugar, 1 lb; butter, ¾ lb; eggs, 7; flour, 1 lb; citron, ¼ lb; nutmeg, 1 teaspoonful; cinnamon, 1 teaspoonful; currants, ½ lb; raisins, ½ lb; brandy, 1 wineglassful.

Beat one pound of fine white sugar and three quarters of a pound of butter to a cream; add the yolks of seven eggs, beaten to a froth; then the whites of the eggs, whipped to a froth, and a quarter of a pound of citron, one teaspoonful of nutmeg, one of cinnamon, and one pound of flour; stir together, and add half a pound of currants, washed carefully and dredged, and half a pound of raisins, seeded and chopped; finally a wineglass of brandy. Mix thoroughly, and bake in a moderately quick oven.

II. (With Apples.)—*Take:*–Dried apples, 3 cupfuls; molasses, 3 cupfuls; flour, 3 cupfuls; butter, 1 cupful; eggs, 3; cream-tartar, 1 teaspoonful; soda, ½ teaspoonful; spice and raisins.

Take three cups of dried apples; three of molasses; three of flour; one of butter; three eggs; one teaspoonful of cream-tartar; and half a teaspoonful of soda. Soak the dried apples in water until soft; then chop them up fine and boil them with the molasses for half an hour; let them cool, and then add the butter, eggs, and flour. Beat the eggs very high, and sift the cream-tartar and soda in with the flour. Bake in a slow oven three hours.

Gingerbread.—I. *Take:*–Sugar, ½ lb; butter, ½ lb; flour, 2 lbs; caraway seed, 1 oz; ground ginger, 1 oz; coriander seed, ½ oz; molasses, 1¾ lbs.

Rub together half a pound of fine sugar and half a pound of butter; then add two pounds of flour, well dried by the fire, one ounce of caraway seed, one ounce of ground ginger, and half an ounce of coriander seed. Mix them with one and three quarter pounds of molasses, roll thin, and bake in a quick oven.

II. (Fleming).—*Take:*–Butter and sugar, ¼ lb. each; molasses, ½ pt; eggs, 4; flour, 1½ pts; ground ginger, 1 tablespoonful; cinnamon, 1 teaspoonful; soda or pearlash, 1 teaspoonful.

Stir together a quarter of a pound of butter and a quarter of brown sugar; add half a pint of molasses. Beat four eggs to a froth, and stir them into the mixture alternately with rather less than a pint and a half of flour; add a heaping tablespoonful of ground ginger, and a teaspoonful of powdered cinnamon.

Stir all together well. Dissolve a level teaspoonful of soda or pearlash in two tablespoonfuls of warm water, and stir this in last. Put the mixture into a buttered tin pan, set it immediately into the oven which must be brisk but not too hot, and bake well. Test with a straw.

III. (**Hard.**)—*Take:*–Molasses, 1 pt; butter, ½ lb; sour milk, 1 teacupful; ground ginger, 2 tablespoonfuls; soda, 1 tablespoonful; cloves, 1 tablespoonful; lemon, rind of 1; flour.

Mix one pint of molasses, half a pound of butter, one cupful of sour milk, two tablespoonfuls of ginger, one tablespoonful of soda, one tablespoonful of cloves, the rind of one lemon (grated), and flour enough to make a stiff paste. Butter the tin sheets, roll the dough on them, sprinkle lightly with sugar as thin as possible, and bake in a quick oven.

IV. (**Soft.**) — *Take:* – Butter, 1 teacupful, melted; molasses, 1 pt; ground ginger, 1 tablespoonful; flour, 1 pt; eggs, 2; saleratus, 2 teaspoonfuls; sour milk, ½ pt; flour; lemon peel.

Mix a teacupful of melted butter with a pint of molasses, a tablespoonful of ground ginger, a pint of flour, and two beaten eggs; a fresh lemon peel, cut into strips, may be added. Mix two teaspoonfuls of saleratus in half a pint of sour milk, stir it into the cake, and add flour enough to make soft sponge. Bake in deep pans, in a moderately quick oven, about half an hour.

V. (**Spiced.**)—*Take:*–Sugar, 1 lb; butter, ½ lb; eggs, 5; milk, 3 tablespoonfuls; cream-tartar, 1 teaspoonful; soda, ½ teaspoonful; ground ginger, 1 tablespoonful; flour, 1 lb; cloves, nutmeg, and cinnamon, teaspoonful each.

Stir one pound of sugar and half a pound of butter to a cream; add five eggs beaten to a froth, three tablespoonfuls of sweet milk, one teaspoonful of cream-tartar, half a teaspoonful of soda dissolved in a little hot water, a heaping tablespoonful of ground ginger, and one teaspoonful each of cloves, nutmeg, and cinnamon; mix together well and add one pound of flour. This amount will make two good sized loaves.

VI. (**Sponge.**)—*Take:*–Molasses, 1 cupful; butter, ¼ cupful; ginger, 1 tablespoonful; sour milk, 1 cupful; saleratus, 1½ teaspoonfuls; flour.

Mix a cupful of molasses, half a cupful of butter, and one tablespoonful of ginger, and set it on the fire till well warmed; then add one cupful of sour milk, one teaspoonful and a half of saleratus, and enough flour to make a stiff sponge. Bake at once in a rather quick oven.

VII. Sugar.—*Take:*–Sugar, 1 lb; butter, 6 oz; eggs, 4; ground ginger, 3 teaspoonfuls; flour, 1½ lbs; saleratus, 1 teaspoonful; milk, 1 wineglassful.

Mix a pound of sugar and six ounces of butter; beat four eggs to a froth and stir them into the butter and sugar, with three teaspoonfuls of ground ginger; stir in gradually a pound and a half of flour; dissolve a teaspoonful of saleratus in a wineglass of milk, and stir it in; roll out and bake immediately in a quick oven.

Ginger Snaps.—I. *Take:*–Butter and lard, ¼ lb each; brown sugar, ¼ lb; molasses, 1 pt; ginger, 2 tablespoonfuls; flour, 1 qt; saleratus, 2 teaspoonfuls; milk, 1 wineglassful.

Take a quarter of a pound of butter and the same quantity of lard, melt them and mix with a quarter of a pound of brown sugar, a pint of molasses, two tablespoonfuls of ground ginger, and a quart of flour. Dissolve two teaspoonfuls of saleratus in a wineglass of milk, strain it into the cake, and add sufficient flour to make a soft dough. Roll it out thin, cut into small cakes, and bake them in a quick oven.

II. *Take:*–Butter and lard, ½ cupful each; sugar, 1 cupful; molasses, 1 cupful; water, ½ cupful; ground ginger, cinnamon, and cloves, 1 tablespoonful each; soda, 1 teaspoonful; flour.

Mix half a cupful of butter with the same quantity of lard; add one heaping cupful of sugar, one cupful of molasses, half a cupful of cold water, one tablespoonful each ground ginger and cinnamon, one teaspoonful of cloves, one of soda dissolved in hot water, and enough flour to make a pretty stiff dough. Roll out thin, and bake at once.

Golden Cake.—*Take:*–White sugar, 1 lb; butter ¾ lb; eggs, yolks of 16; flour, 2 lbs; milk, 1 cupful; lemon, 1; mace; baking powder.

Mix together one pound of fine white sugar, three quarters of a pound of butter, the yolks of sixteen eggs, the rind and juice of one lemon, one cupful of milk, and two pounds of flour, with two teaspoonfuls of baking powder; season to taste with mace. Bake about half an hour.

Honey Cake.—*Take:*–Honey, 1 qt; butter ¾ lb.; sugar 1 lb.; soda 1 tablespoonful (slightly heaped); caraway seeds, ½ a gill.

Warm the quart of honey and the pound of sugar in a tin pan; add the three quarters of a pound of butter, the tablespoonful of soda dissolved in a little warm water, the half gill of caraway seeds, and flour to make it stiff enough to roll. Roll it thick, score and bake in a sheet or tin, and cut it in small cakes.

Huckleberry Cake.—*Take:*–Sugar, 1 cupful; molasses, 1 cupful; milk, 1 cupful; butter, ½ cupful; cream-tartar, 1½ teaspoonfuls; soda, 1 teaspoonful; flour; huckleberries, 1 pt; allspice, cinnamon, and cloves.

Beat together one cup of sugar, one of molasses, one of milk, half a cup of butter, one teaspoonful and a half of cream-tartar, one teaspoonful of soda dissolved in a little warm water; stir in enough flour to make a soft sponge, and then add one pint of huckleberries, washed and dredged; season to taste with allspice, cinnamon, and cloves.

Jelly Cake.—I. *Take:*–Sugar, 1 lb; butter, ½ lb; milk, 1 cupful; eggs, 6; cream-tartar, 1 teaspoonful; soda, ½ teaspoonful; flour, 1 lb; jelly.

Stir to a light cream one pound of sugar and half a pound of butter; add one cupful of milk, six eggs beaten to a froth, one teaspoonful of cream-tartar, half a teaspoonful of soda, and one pound of flour. Spread over buttered tins to the thickness of a quarter of an inch, bake till brown, and when done pile them on a plate, and put a layer of jelly between.

II. *Take:*–Sugar, ½ lb; butter, 6 oz; eggs, 8; flour, 1 lb; lemon, 1; jelly.

Stir together till white half a pound of rolled sugar and six ounces of butter; beat eight eggs to a froth, stir them into the butter and sugar, and add a pound of flour; add the juice and grated rind of a fresh lemon; turn this mixture into scolloped tin plates that have been well buttered. Bake and arrange as in No. 1.

Lady Cake.—*Take:*–Sugar, 1 lb; butter, 6 oz; eggs, whites of 12; flour ¾ lb; lemon, or bitter almond.

Stir together one pound of sugar and six ounces of butter; add the whites of twelve eggs whipped to a froth, and three-quarters of a pound of flour; flavor with bitter almond or with the juice and grated rind of one lemon. Bake in square shallow tins, and flavor the frosting with vanilla.

Lemon Cake.—I. *Take:*–Sugar, 3 cupfuls; butter, one cupful; milk, one cupful; eggs, 5; saleratus, 1 teaspoonful; flour, 4 cupfuls; lemons, 2.

Beat three cups of sugar and one of butter to a light cream; add one cup of milk, five eggs beaten to a froth, one teaspoonful of saleratus, four cups of flour, and the juice and grated rind of two lemons. Beat together thoroughly and bake in a moderately quick oven.

II. *Take:*–Sugar, 1 lb; butter, ¾ lb; eggs, 7; flour, 1 lb; lemons, 2; currants 1½ teacupfuls.

Beat one pound of sugar and three-quarters of a pound of butter to a cream; add the yolks of seven eggs beaten to a froth and strained; whip the whites up stiff and stir them in with one pound of dried flour, the juice of one lemon and the peel of two cut into strips, and a cupful and a half of currants. The currants may be left out if desired. Bake in a moderately quick oven.

Loaf Cake.—I. *Take:*–Brown sugar, 1 lb; butter, ¾ lb; sour milk, 1 pt; molasses, 1 pt; eggs, 5; soda, 2 teaspoonfuls; flour, 3 lbs; currants, 2 lbs; raisins (seeded), 1 lb: cloves, allspice, and cinnamon, 1 teaspoonful each; nutmeg, 1 (grated).

Beat together a pound of brown sugar and three quarters of a pound of butter; add a pint of sour milk, a pint of molasses, five eggs beaten to a froth, two teaspoonfuls of soda, one teaspoonful each of cloves, allspice, and cinnamon, one grated nutmeg, and three pounds of flour. Mix well, and then stir in two pounds of currants, carefully washed, and one pound of seeded raisins. Bake in a moderately quick oven.

II. **(Raised.)**—*Take:*–Flour, 2 lbs; milk, yeast, 1 teacupful; butter, 1 lb; white sugar, 1¼ lb; eggs, 4; wine and brandy, one wineglassful each; mace or nutmeg; raisins (seeded), 2 lbs; citron, or almonds, ¼ lb.

Stir a pound of flour gradually into a pint of lukewarm milk, add a small teacupful of yeast, and set where it will rise quickly. When it is of a spongy lightness, stir one pound of butter and a pound and a quarter of fine white sugar to a cream, and work into the sponge with the hand. Beat four eggs to a froth, the whites and yolks separately, mix them with the cake, and add a wineglass of wine, one of brandy, a quarter of an ounce of mace, or (if preferred) one grated nutmeg. Add one pound of flour and work the dough with the hand for fifteen or twenty minutes. Set it to rise, and when perfectly light, work it a few minutes with the hand, and add two pounds of seeded raisins, a quarter of a pound of citron, or the same quantity of almonds blanched and pounded fine. Place in buttered cake-pans; let them stand half an hour in a warm place; then bake in a quick oven about an hour and a half. If the tops brown too fast, cover over with buttered paper. This cake is very rich and nice.

Marbled Cake.—*Take:*-Brown sugar, ½ cupful; white sugar, 1 cupful; molasses, ½ cupful; butter, ¾ cupful; milk, ¾ cupful; cream-tartar, 2 teaspoonfuls; soda, 1 teaspoonful; cinnamon, 1 teaspoonful; eggs, 3; allspice, ½ teaspoonful; nutmeg (grated), ½; flour, 4 cupfuls.

This is made by mixing a light batter and a dark one, and baking them in alternate layers. For *dark* batter: Beat together half a cup of brown sugar, half a cup of molasses, a quarter of a cup of butter, quarter of a cup of milk, one teaspoonful of cream-tartar, one of cinnamon, half a teaspoonful of soda, half a teaspoonful of allspice, half a grated nutmeg, the yolks of three eggs well beaten up, and two cupfuls of flour. For *light* batter: Mix one cup of white sugar, half a cup of butter, half a cup of milk, the whites of three eggs whipped to a froth, one teaspoonful of cream-tartar, half a teaspoonful of soda, and two cups of flour. Butter the pan well and put in the two batters in alternate spoonfuls.

Measure Cake.—*Take:*–Sugar, 2 cupfuls; butter, 1 cupful; eggs, 4; nutmeg (grated) 1; flour, 1 pt.

Stir two cupfuls of sugar and one of butter to a light cream; then add four eggs beaten to a froth, one grated nutmeg, and a pint of flour. Stir it constantly until just before it is put into the oven. Bake either in cups or pans.

Molasses Cake.—*Take:*-Molasses, 1 cupful; sugar, 1 cupful; warm water, 1 cupful; soda, 1 tablespoonful; lard, ⅔ cupful; salt, ½ teaspoonful; flour.

Mix one cup of molasses, one cup of sugar, one of warm water with a teaspoonful of soda dissolved in it, two-thirds of a cup of lard, half a teaspoonful of salt, and enough flour to make a dough as soft as can be rolled. Roll out thin, cut into cakes, and bake in a quick oven.

Mountain Cake.—Mix together three-quarters of a pound of sugar, half a pound of butter, one pound of flour, the yolks of six eggs, and whites of four beaten to a froth, one teacupful of milk, one teaspoonful of soda, and two of cream-tartar; flavor with vanilla. For a jelly to put over the top, beat together the whites of eggs left over, one pound of sugar, and a cupful of current jelly.

Nut Cake.—*Take:*–Sugar, 1½ cupfuls; butter, ½ cupful; eggs, 3; milk, ½ cupful; flour, 2½ cupfuls; cream-tartar, 1 teaspoonful; soda, ½ teaspoonful; hickory-nut meats (or any other kind), 1 cupful. Beat together one and a half cupfuls of coffee sugar, half a cupful of butter, and three eggs, to a light froth; add alternately the half cup of milk in which the soda has been dissolved, and the two and a half cups of flour with which the cream-tartar has been sifted; add the half cupful of nuts and bake in one loaf.

Orange Cake.—*Take:*–Flour, 1 lb, lacking 3 even tablespoonfuls; sugar, 1 lb; butter, ¼ lb; sweet milk, ½ pt; baking powder, 1½ even tablespoonfuls; eggs, 5.

Cream the butter with the sugar, adding enough of the milk to make them mix easily; add the yolks of the eggs and beat well, then add the milk, the beaten whites of the eggs and the flour in which the baking powder has been well mixed. Spread one-third of an inch deep in jelly cake pans, and bake in a very quick oven. Make this icing: Whites of three eggs, beaten stiff, one pound and a quarter of powdered sugar; grated rind, soft pulp and juice of two large sour oranges and one lemon. Add sugar for outside icing.

Plum Cake. (English.)—Take a pound and a half of flour, one pound of butter, one of sugar, half a pound of currants, half a pound of candied citron and orange peel, two ounces of sweet almonds, half an ounce of allspice, half an ounce of cinnamon, ten eggs, and one wineglassful of brandy. Beat the sugar and butter to a light cream; add the allspice and pounded cinnamon; work in the yolks of the eggs, two at a time; whip the whites till they are highly frothed, and work them in, keeping the paste warm, or it may become heavy. Cut the citron and orange peel into strips; mix them with the currants (previously well washed and dried before the fire), and also with the almonds; stir in by degrees the flour, and then the brandy. Beat the whole together thoroughly, and bake 1½ hours in a moderate oven. There should be a couple sheets of paper both under the cake and over the top of it.

Portugal Cake.—Stir one pound of fine white sugar and half a pound of butter to a cream; add eight eggs, the whites and yolks beaten separately; stir in gradually one pound of flour; and then add one pound of fruit, a grated nutmeg, one and a half pounds of sweet almonds, blanched and pounded, and last of all two tablespoonfuls of lemon juice. Stir together thoroughly, and bake at once.

Pound Cake.—I.—*Take:*–White sugar, 1 lb; butter, ¾ lb; eggs, 8; flour, 1 lb; lemon or nutmeg.

Stir one pound of fine white sugar, and three quarters of a pound of butter to a light cream; add eight eggs, the whites and yolks beaten separately to a froth, and one pound of flour; flavor to taste with lemon or nutmeg. Cover with icing as soon as done.

II. *Take:*–White sugar, 1 lb; butter, ¾ lb; eggs, 10; flour, 1 lb; currants, 1 teacupful; white wine, 1 wineglassful; mace, ½ teaspoonful; nutmeg, ½ (grated).

Beat a pound of fine white sugar, and three quarters of a pound of butter to a cream; beat up ten eggs, the whites and yolks separately: add the yolks to the butter and sugar, and stir in a wineglass of white wine, half a teaspoonful of mace, and half a grated nutmeg; mix well together, and add the whites of the eggs; stir in a pound of flour thoroughly, and then add a teacupful of currants, washed and dried. Bake in a rather quick oven.

Queen's Cake.—*Take:*–Sugar, 1 lb; butter, ¾ lb; wine, brandy, and milk, a wineglassful each; flour, 1 lb; mace, ¼ oz; rose-water, or ess. of lemon, 1 teaspoonful; eggs, 8; raisins, ½ lb; Zante currants, ½ lb; citron or almonds, ½ lb.

Stir a pound of sugar, and three-quarters of a pound of butter to a very light cream; mix a wineglass of white wine, one of brandy, and one of milk, and stir them into the butter and sugar; add a pound of flour, a teaspoonful of rose-water or essence of lemon, and a quarter of an ounce of mace. Beat eight eggs to a froth, the whites and yolks separately, and add them to the paste; stir the whole well together, and then add, just before baking, half a pound of seeded raisins, half a pound of Zante currants, a quarter of a pound of citron, or almonds, blanched and pounded fine in rose-water. The fruit should be stirred in gradually, a handful of each alternately. Put in pans lined with buttered white paper, and bake it from an hour and a quarter to an hour and a half, according to the heat of the oven.

Quick Cake.—*Take:*–Raised bread-dough, 1½ lbs; butter, ½lb; sugar, ¾ lb; eggs, 4; wine or brandy, 1 wineglassful; cinnamon, 1 teaspoonful; nutmeg, 1; milk, 1 teaspoonful; saleratus, ½ teaspoonful; raisins (seeded), 1 lb.

Melt half a pound of butter, and when cool, work it into a pound and a half of raised bread-dough. Beat four eggs and three-quarters of a pound of rolled sugar together, and mix with the dough: add a wineglass of wine or brandy, a teaspoonful of cinnamon, and a grated nutmeg. Dissolve half a teaspoonful of saleratus in a teaspoonful of milk, strain it over the dough, and work the whole with the hands for a quarter of an hour; then add a pound of seeded raisins, and put it into cake-pans. Let it stand in them until light before putting it into the oven.

Raised Cake (without eggs).—*Take:*–Sugar, 1 coffeecupful; butter, ½ cupful; milk and

warm water, ½ pt. each; home-made yeast, ½ cupful; flour; raisins or currants, 1 cupful; cinnamon, cloves, and grated nutmeg, 1 teaspoonful each.

Stir together a large coffeecupful of sugar and half a cupful of butter; add half a pint of sweet milk and half a pint of warm water. To this mixture stir in flour enough to make a thick dough, and half a cupful of yeast; set it to rise over night. Next morning stir in a cupful of seeded raisins or currants, and a teaspoonful each of cinnamon, cloves, and grated nutmeg. Put into baking-pans, let it rise until perfectly light, then bake three-quarters of an hour in a moderately quick oven.

Republican Cake.—*Take:*–Flour, ½ lb; butter ¼ lb; sugar, 6 oz; cream, ½ teacupful; eggs 3; baking-powder, 1 teaspoonful; raisins, 1 teacupful; white wine, ½ wineglassful; nutmeg, cloves, and cinnamon.

Mix together half a pound of flour, a quarter of a pound of butter, six ounces of sugar, three eggs beaten to a froth, a teaspoonful of baking-powder, one teacupful of raisins, and half a wineglass of white wine, and half a teacupful of cream; season to taste with nutmeg, cloves, and cinnamon. Bake at once in a moderately hot oven.

Rice Cake.—*Take:*–Ground rice, 10 oz; white sugar, 8 oz; flour, 3 oz; eggs, 6; nutmeg, ½ (grated).

Mix ten ounces of ground rice, eight ounces of powdered white sugar, and three of wheat flour; sift the whole into the beaten yolks of six eggs; add the whites of the eggs, whipped to a stiff froth, and half a grated nutmeg. Beat together very gently, put into deep pans, and bake about twenty minutes in a quick oven. If not watched they may burn.

Royal Cake.—*Take:*–Sugar, 1¾ lbs; butter, 1 lb; eggs, 4; milk, 1 ½ pts; soda, ½ teaspoonful; brandy, ½ teacupful; flour, 2¾ lbs; nutmeg, 1; raisins and currants (mixed), 1 lb; citron, ¼ lb; cloves, allspice, cinnamon, 1 teaspoonful each.

Stir together one pound and three-quarters of sugar, and one pound of butter; add four eggs beaten to a froth, a pint and a half of milk, half a teaspoonful of soda, half a teacupful of brandy, two pounds and three-quarters of flour, one nutmeg, a teaspoonful each of cloves, allspice, and cinnamon, two pounds of raisins and currants mixed, and a quarter of a pound of citron. Bake in thick loaves in a moderately quick oven.

Savory Cakes.—*Take:*–White sugar, 1 lb; eggs, 8; flour, 1 lb; coriander seed, 2 tablespoonfuls; lemon, 1.

Mix together a pound of powdered white sugar, and eight eggs, the whites and yolks beaten up separately; beat them well together for several minutes, then add the grated rind of a fresh lemon and half the juice, a pound of flour, and two tablespoonfuls of coriander seed. Drop this batter by the large spoonful upon buttered baking pans, sift white sugar over them and bake them immediately in a quick oven.

Scotch Cake.—*Take:*–Sugar, 1 lb; butter, ¾ lb; lemon, 1; brandy, 1 wineglassful; eggs, 9; flour, 1 lb; raisins (seeded), 1 lb.

Stir a pound of sugar and three-quarters of a pound of butter to a very light cream; add the juice and grated rind of a lemon, and a wineglass of brandy. Beat nine eggs the whites and yolks separately, to a froth and stir them into the cake; then add a pound of flour, and, just before it is put into the bake-pans, a pound of seeded raisins. Bake in a moderate oven.

Shrewsbury Cake.—*Take:*–White sugar, ¾ lb; butter, ½ lb; eggs, 5; flour, 1 lb; rose-water or grated lemon peel.

Stir three-quarters of a pound of powdered white sugar and half a pound of butter to a cream; add five eggs, the whites and yolks beaten separately; then stir in a pound of flour dried by the fire, and flavor to taste with rose-water or grated lemon peel. Mix thoroughly, and bake at once.

Silver Cake.—*Take:*–White sugar, 1 lb; butter, ½ lb; eggs, whites of, 10; flour, ¾ lb; ess. bitter almonds, 1 teaspoonful.

Beat to a cream one pound of fine white sugar, and half a pound of butter,; add the whites of ten eggs, whipped to a stiff froth; then add three-quarters of a pound of flour, flavor with one teaspoonful of the essence of bitter almonds. Flavor the icing with rose-water.

Spice Cakes.—*Take:*–Butter, 1 teacupful; sugar, 1 teacupful; molasses, ½ teacupful; saleratus, 1 teaspoonful; nutmeg, 1 (grated), ground ginger, cinnamon, caraway seed, coriander seed, 1 teaspoonful each.

Melt a teacupful of butter, and mix it with a teacupful of sugar, and half a teacupful of molasses; add a teaspoonful of cinnamon, a teaspoonful of ground ginger, a grated nutmeg, and a teaspoonful each of caraway and coriander seed; put in a teaspoonful of saleratus, dissolved in half a teacupful of warm water, stir in flour till stiff enough to roll out thin; cut into cakes and bake them in a slow oven.

Sponge Cake.—*Take:*–Powdered sugar, 2 cupfuls; flour, 1½ cupfuls; eggs, 7; lemon, the grated rind and juice of one. Beat the yolks of the eggs with the sugar until very light; add the rind of the lemon and the whites beaten to a stiff froth; sift in the flour and all the juice, stirring as gently as possible.

II. (White.)—*Take:*–Sugar, 1½ cupful; flour, 1 cupful; eggs, whites of 10; cream-tartar, 1 teaspoonful.

Take one and a half cupfuls of sugar, one cupful of flour, the whites of ten eggs, and one teaspoonful of cream-tartar. Beat the eggs to a froth and stir the sugar with them; put the cream-tartar in the flour, and then stir the flour with the paste lightly and quickly. Do not stir the cake after the flour is fairly in. Bake in a quick oven.

III. *Take:*–Loaf sugar, weight of 10 eggs; eggs, 12; lemon, 1; flour, weight of 6 eggs.

Take the weight of ten eggs in powdered loaf sugar, beat it to a froth with the yolks of twelve eggs, and add the juice and grated rind of a fresh lemon; whip the whites of twelve eggs to a stiff froth, and mix them with the sugar and yolks. Stir the whole constantly for fifteen minutes, and then sprinkle in the weight of six eggs in sifted flour. The moment the flour is well mixed in, turn the cake into pans lined with buttered paper, and bake immediately in a quick oven. It will bake in about twenty minutes.

Strawberry Short Cake (I.)—*Take :*–Flour, 1 qt; eggs, 4; cream or melted butter, 1 teacupful; milk; salt, 1 teaspoonful; strawberries; white sugar.

Mix a quart of flour with four beaten eggs, a teacupful of cream or melted butter, and a teaspoonful of salt; add enough milk to roll it out. Roll it out thin; line a shallow baking-pan with part of it, put in a thick layer of nice, ripe strawberries, and sprinkle in sufficient white sugar to sweeten them; cover them with a thin layer of the crust; then add another layer of strawberries and sugar, and cover the whole with another layer of the crust. Bake in a quick oven about twenty-five minutes.

Strawberry Short Cake (II.)—*Take :*–A soda biscuit crust made with flour, 1 qt; soda, 1 teaspoonful; cream-tartar, 2 ½ teaspoonfuls; butter, 2 oz; lard, 1 oz; salt, 1 even teaspoonful; sweet milk, 3 gills. This will make two cakes.

If the cake is to be served on a platter, roll the crust the shape and size inside the rim; if a dinner plate is to be used, make the cakes round. Roll the crust to the thickness of half an inch, prick and bake in a quick oven. Have the strawberries cut in two or three pieces, split the cakes, lay one half on the plate; butter it and put over it a thick layer of strawberries and sugar; then replace the other half, upside down, if there is to be another layer of fruit. The two cakes may be served together or separately and the upper layer may be fruit or crust, as preferred. Leave in the oven from five to ten minutes, and serve smoking hot.

Sugar Cake.—*Take :*–Raised dough, 3 teacupfuls; saleratus, ½ teaspoonful; wine or milk, 1 wineglassful; butter, ⅔ teacupful; sugar, 2 teacupfuls; eggs, 3; cinnamon, 2 teaspoonfuls.

Dissolve half a teaspoonful of saleratus in a wineglass of wine or milk, and strain it on three teacupfuls of raised dough. Work into this two thirds of a teacupful of lukewarm melted butter, two teacupfuls of coffee sugar, three eggs beaten up well, and two teaspoonfuls of cinnamon. Work the whole with the hands for fifteen minutes; then put it into cake-pans and let it stand until light before baking it.

Raisins, stoned and chopped, dried currants and citron greatly improve this cake.

Sugar Drops. — *Take :*–White sugar, 24 tablespoonfuls; butter, 12 tablespoonfuls; eggs, 3; flour, 1 pt; nutmeg (grated), ½.

Stir to a cream twenty-four tablepoonfuls of powdered white sugar and twelve teaspoonfuls of butter; add three eggs, the whites and yolks beaten separately, a pint of flour, and half a grated nutmeg. Drop from the spoon on buttered tins, bake ten or fifteen minutes, and when done put a sugar plum on the top of each.

Tea Cakes.—*Take :*–Sugar, 1½ teacupfuls; butter, ½ teacupful; nutmeg (grated), ½; milk, 1 teacupful; saleratus, ½ teaspoonful; flour.

Beat together one teacupful and a half of sugar, and half a teacupful of butter; stir in half a teacupful of flour, and half a grated nutmeg. Dissolve half a teaspoonful of saleratus in a teacupful of milk, strain and mix it with the cake; add flour till stiff enough to roll out. Roll it out half an inch thick, cut into cakes, and bake them on flat buttered tins in a quick oven. If the oven is not quick they will be spoiled.

Washington Cake.—*Take :*–Sugar, 3 cupfuls; butter, 2 cupfuls; eggs, 5; milk, 1 cupful; cream-tartar, 2 teaspoonfuls; soda, 1 teaspoonful; flour, 4 cupfuls; currants, ½ lb; raisins, ¼ lb; citron, ½ teacupful; nutmeg and cinnamon.

Stir three cupfuls of sugar and two of butter to a cream; then add five eggs, beaten to a froth, one cupful of milk, two teaspoonfuls of cream-tartar, one of soda, and four cupfuls of flour. Mix altogether thoroughly, and just before baking stir in half a pound of currants washed and dried, a quarter of a pound of raisins seeded and chopped fine, and half a teacupful of citron sliced; flavor to taste with nutmeg and cinnamon. Bake in a steady, moderately quick oven.

Webster Cake.—Beat together three cupfuls of sugar and one cupful of butter; add two eggs beaten to a froth, one teaspoonful of soda, one cupful of milk, five cupfuls of flour, and the rind and juice of a lemon. Mix in fruit and spice to taste. Bake in a moderately quick oven.

Wedding Cake.—*Take :*–Sugar, 1 lb; butter, 1 lb; eggs, 10; brandy, ½ pt; wine, 1 wine-glassful; nutmegs, 3; cinnamon, 1 tablespoonful; flour, 1 lb; currants, 2 lbs; seeded raisins, 1 lb; citron, ½ lb.

Stir one pound of sugar and one of butter to a light cream; add ten eggs beaten thick and smooth, half a pint of brandy, a wineglass of wine, three grated nutmegs, a tablespoonful of mace, and a pound of flour. Mix thoroughly, and then add two pounds of currants washed and dried, one pound of seeded raisins, and half a pound of citron. Bake in a moderate oven from one to two hours. Try the cake with a straw, and be sure that it is done before removing it; then turn the loaves upside down on a sieve, and immediately cover the bottom and sides with this icing; beat the whites of three eggs until frothy only, not white; beat in gradually one pound of powdered sugar; flavor with vanilla, or fresh lemon juice. Put several large spoonfuls on the cake, and smooth it with a knife. It will dry quickly.

White Cake.—*Take :*–Sugar, 2 cupfuls; butter, 1 cupful; milk, 1 cupful; eggs, whites of

six ; tartar, 2 teaspoonfuls ; soda, 1 teaspoonful ; flour, 2 cupfuls ; cornstarch 1 cupful.

Beat together two cups of sugar and one of butter; add one cupful of sweet milk, the white of six eggs whipped to a froth, two teaspoonfuls of cream-tartar, one of soda, two cupfuls of flour, and one of cornstarch. Mix together thoroughly, and bake in a rather quick oven.

White Mountain Cake.—*Take* :-Flour, 1 lb ; sugar, 1 lb ; butter, ½ lb ; milk ½ pt ; eggs, whites of 6; baking powder, 3 even teaspoonfuls.

Cream the butter, add the sugar by degrees, and a little of the milk; sift the flour and baking powder together, and add alternately with the rest of the milk, and the whites beaten to a stiff froth. Bake in jelly cake-pans, and arrange in layers with cocoanut icing between the cakes, and over the top and sides of the loaf.

Wine Cake.—Take powdered sugar, 12 oz; flour, 8 oz ; wine, 1 gill ; eggs, 6.

Heat the wine, pour it over the sugar, cover and let it stand while the yolks and whites are beaten separately until very light, and then beaten together ; add the wine and sugar, and beat until thick ; beat in gently the sifted flour, pour into paper-lined pans, and bake at once.

Yardley Cake.—Cream half a pound of butter; add gradually, with one gill of milk, one and a quarter pounds of powdered sugar ; six well-beaten eggs, another gill of milk, with eighteen ounces of flour which has been sifted with one and a half tablespoonfuls of baking-powder, and one pound of stoned raisins, with one pound of shred, blanched almonds. Bake in loaves.

CALCELLARIA. — A pretty plant with showy flowers, much cultivated by florists. The shrubby varieties grow readily in the flower-garden in any warm sunny spot with a moderately rich soil. Those used in window gardening are best raised from seedlings. Sow seeds in August in a box containing soil made of three parts light, rich loam, one of fine peat, and one of sand. Transplant the young plants to separate pots; punch out the centre of the plant, and continue to do so till it is of blooming size. As the roots of the plants reach the sides of the pot, re-pot into a size larger; and when the flower-stems push up, tie them neatly to upright sticks. Be careful in watering not to give too much, or the plants will rot. Give all the sun and air possible, and keep the plants close to the glass.

CALF. (*See* VEAL.)

CALF'S-HEAD AND FEET.—Calves' heads are usually sold with the hair scalded and scraped cleanly off. When fresh the eyes have a bright, full look, while the skin seems firmly fastened to the head. There should also be a prominent bump or appearance of the young horns; if there are no signs of horns, the animal was too young to be wholesome as food. Do not purchase either calves' heads or feet if they have a yellowish look, or a slippery, slimy feeling. In buying feet, reject the very small ones.

To cleanse calf's head or feet, wash them clean, sprinkle powdered resin over the hair, dip them in boiling water and take out immediately, and then scrape them clean; afterwards soak them in water four days, changing the water every day.

To Cook.—Remove the brains and put the head and feet in salted water, just enough to corn them; boil two hours. Soak the brains, skin them and pick out every bit of membrane till they are perfectly white; when the head, etc., have boiled nearly an hour and a half, tie the brains in a cloth and put them in the pot with the rest. When the two hours have elapsed, take the whole from the fire; mash the brains fine with the back of a spoon, season them with pepper and salt, bread-crumbs, and a wineglass of wine, and use them as a sauce for the meat. Send to the table very hot. The liquor that remains can be made into an excellent soup.

Calf's Foot Jelly.—*Take* :-Calf's feet, 4; white wine, 1 pt; lemons, 2; eggs 6; cinnamon, 1 stick.

Boil four feet (that have been carefully washed) in four quarts of water till very soft and the water is reduced to two quarts. Remove from the fire and let it stand till perfectly cold, then scrape off all the fat and dregs. Put the jelly in a preserving kettle, and set it on a slow fire ; when it melts, take it from the fire, mix into it a pint of white-wine, the juice and a grated rind of two fresh lemons, and a stick of cinnamon, broken into bits. Wash and wipe dry six eggs; beat the whites to a froth and stir them into the jelly when it is cool; bruise the egg-shells and mix them in, and then set the jelly on a few coals. When hot, sweeten it to the taste with white sugar. Let it boil slowly fifteen minutes without stirring it; then strain through a flannel bag into a deep dish or pitcher—if it is not clear the first time, pass it through the bag again. The bag should not be squeezed; if it is, the jelly will not look clear. When strained, pour it into glasses, and if the weather is hot set the glasses into cold water and keep them in a cool place. Even then the jelly will keep but a few days.

CALICO.—A cheap cotton cloth, so called because it was originally imported into Europe from Calicut in India. It is made of an infinity of different patterns and of several qualities, and the colors are sometimes "fast" and again wash out the moment they are dipped into water. Calicoes are frequently so full of "sizing," a preparation put in by the manufacturer to give them a better appearance, that it is difficult to ascertain their quality ; it is best, therefore, to choose calico that is free from sizing, and to see that the threads are straight and evenly woven.

CALIFORNIA WINES. (*See* AMERICAN WINES.)

CALLA.—The Calla Lily is one of the most

ornamental plants that can be grown either in house or garden. It grows sometimes as high as five feet, has broad, green, beautifully veined leaves more than a foot long, and when blooming throws up a long raceme of *delicately tinted* flowers. It is a bulbous plant; and if planted in the spring in a light rich soil, and copiously watered during the hot weather, will bloom freely during the summer. It may be wintered in a light cellar without difficulty; or the bulbs may be taken up after the first frost and kept during the winter in some dry place where the temperature does not fall below 50°. In the latter case, plant again in April or May. When grown as a house plant they should be potted in soil composed of richest loam and peat well mixed; they should be watered abundantly, and placed where the sunlight will reach them freely. If a plant with a single stem is desired, remove all suckers: otherwise they will do no harm to remain.

CALLIPASH.—The green, gelatinous fat which forms part of the upper shield of the turtle. It, together with *Callipee*, the yellowish fat which belongs to the lower shield, is considered by epicures the choicest portion of the turtle.

CALOMEL.—A preparation of mercury, used as an alterative and purgative, and in certain specific diseases. Calomel has always been inveighed against by quacks of every description, so that a common popular impression exists against its employment at the present day. It still, however, remains a valuable remedy in many conditions of the human system, though it should be used only under proper direction—never as an article of domestic medicine. Dose, from 5 to 10 grains in pill.

CAMBRIC.—An exquisitely fine and beautiful cloth made of flax or linen; there is also an imitation of cambric made of cotton. French cambric, when genuine and of the best kind, is superior to any other; it has a singularly soft and silky appearance. Scotch cambric is in fact an imitation cambric, made of cotton or of cotton mixed with flax, and is much inferior in retaining its whiteness. *French cambric handkerchiefs* are of three widths, ⅝, ¾, and ⅞ of a yard.

CAMELLIA.—There is one variety of the camellia, the *single red*, which will stand the winter out of doors as far north as the Middle States, but it is chiefly as a window plant that camellias are so ardently cultivated. They should be grown in a light loam, or sandy peat and loam; and the pots should be filled one-third full of potsherds in order to secure drainage If the roots of the plant become sodden its health is gone, and years of care may fail to restore its beauty. When in a growing state, too much water can hardly be given, and frequent sprinklings and syringings are good; this operation, however, must never be performed in sunny weather. One chief care in the culture of camellias is to keep them perfectly clean; dust upon the foliage not only injures the beauty of the plant, but affects its health. Too much heat will also injure the plants, and the temperature of the room in which they are left should never be permitted to rise above sixty-five or seventy degrees during the day, or to fall below forty at night. The plants when in bloom should be shaded, as thus the flowers will remain in perfection much longer. They should have plenty of air at all times, but during the season of growth they must be protected from chilling draughts which would cause the young leaves to curl up and stunt the plants. During the summer, the plants should be placed in a shady, airy situation out of doors, with plenty of room between them to allow a free circulation of air. A common error in the culture of camellias is too frequent re-potting. A vigorous plant will not require re-potting oftener than every three years, and the very largest plants will flourish in a pot ten or twelve inches in diameter. Camellias are by nature symmetrical in growth, and by judicious pruning perfect specimens may be secured. Pruning should be done after blooming, just as the plants begin their growth. To insure fine flowers, not more than one bud should be allowed to each terminal shoot; remove all others before the buds begin to swell.

The florists' varieties of camellias are almost numberless; but Mr. E. Rand says: "Could we have but one, we would choose Double white or *Candidissima*, for white; for blush, *Lady Humes blush;* for crimson, *Sarah Frost.*" In buying plants, select those of shrubby form, dark green foliage, without any places where leaves have been dropped. Also see that the plant is free from scale, red spider, and mealy bug.

CAMOMILE.—A small plant, growing wild in some places, and very generally cultivated on account of its flowers, an infusion of which makes an excellent tonic known as *camomile tea.* Though the double-flowered kind is most raised by gardeners, the single is the best and strongest medicine. The active principle of camomile is *piperina*, a resinous substance, and it is sometimes used instead of hops in making bitter beers. Camomile tea, which is made by steeping the flowers in boiling water, is good for allaying nausea or arresting vomiting; and, sometimes improves the appetite.

CAMPHOR.—A pure resinous substance found in many plants, but in large quantities in only two, which grow in China and Japan and the island of Formosa. Nearly all the camphor of commerce is brought from China, where its manufacture is the chief industry of several entire districts. It is easily dissolvable in alcohol, though scarcely so in water. Camphor evaporates rapidly when exposed to the air, and as its vapor is poisonous to insects it is very useful in defending clothes, carpets, and the like from moths. It is poisonous to all animals when taken into the stomach in large quantities; though in small doses it will allay nervousness and produce quietude. The odor of camphor, if breathed for a long time, is enervating. *Spirits of camphor* is a solution of the gum in alcohol.

Camphor Oil.—This is a product of the same tree which produces camphor. It is a pale, yellowish, limpid fluid, stimulating when applied externally, and excellent as a liniment.

CANARY BIRD.—Canary birds are natives of the Canary Islands, and hence their name. There are many varieties of them to be had of the bird fanciers. Those having the upper part of the body of a dusky green, and the under part a yellowish green, with dark brown eyes, are the strongest; the choicest, however, or at least the most admired, are those in which the body is white or yellow, and the head, wings, and tail yellowish dun. It is very important that their treatment should conform to the season of the year. They require to be kept in rooms of an even temperature; if exposed to cold they are likely to sicken and die, while if the room is too warm they will moult before the proper time, which it is important to avoid. The cage, which should be provided with three cross-sticks, must be kept clean and have a little fine sand scattered over the bottom of it. Beside seed, canaries may be supplied often with a little green stuff, such as chickweed, water-cress, lettuce, etc., in summer, and thin slices of sweet apple in winter. As they like to wash their feathers, a cup of clean water should be put into the cage frequently for that purpose. Never give them sweet cake or any other rich food.

The best time for pairing canaries is about the middle of April. Birds which are to be paired should be previously kept in the same cage for several days to become acquainted with each other. The pairing cage should be divided into two compartments, with communication between them by a sliding door, so that a separation may be effected when required. For their nest-building, they should be supplied with straw, paper-shavings, moss, wool, or other soft materials, strewed over the bottom of the cage. The female generally lays six eggs, on alternate days; and in about thirteen days after the last one is laid the young birds will make their appearance. As soon as the young ones are hatched, a portion of an egg boiled hard, and chopped very fine, white and yolk together, and mixed with crumbs of white bread, should be put into the cage, and, in another vessel, some rape-seed, well boiled and washed in fresh water. This should be repeated often and great care taken that the food is not allowed to remain in the cage till sour. When about fourteen days old the young birds are able to feed alone; the males should then be placed in a cage, each by himself, in order that his education may not be interrupted. His education is best accomplished by whistling to him the air most desired to be sung. Many canaries have been taught to sing several airs quite correctly. A good education will require from three to six months, and must be carefully followed up.

CANCER.—All that modern surgery has hitherto done with regard to cancer is to define it, its structure, kinds, and history. Nothing satisfactory has been proved as to its causes: neither individuality, locality, mode of life, or conditions. Domestic animals are equally subject to it with man, and pathologists have but slight grounds for suggesting its predisposing causes, such as its being in a small percentage apparently hereditary, and its existence more frequently in the female sex and in the aged. Cancer is a disease of itself, and one of the class of new growths. It is unlike all other tumors, being an infiltration amongst the natural tissues of the body, and its peculiar structure is only to be discerned by the microscope. It is ineradicable: if cut out it returns, if not at the place of operation in some other part or tissue. There are, however, cases where a cancerous tumor has been removed at its first appearance, and the patient has enjoyed immunity from any return for ten, fifteen, or even twenty years. Cancer possesses all the characteristics of a *malignant* growth, as defined by pathologists, namely, constitutional origin, rapid growth, constant increase, pain, returning if cut out, infiltrating every tissue in its vicinity, and invading the lymphatic glands; "it resists all treatment, softens inwardly, ulcerates outwardly, resembles no tissue naturally formed in the body, and ultimately proves fatal."

There are several forms of cancer: 1. Scirrhus; 2. Medullary; 3. Melanotic; 4. Epithelial; 5. Osteoid; 6. Colloid; 7. Villous. The last two forms, however, are by some scarcely held as cancer. *Scirrhus Cancer* is the most frequent, at least in this country, and most commonly affects the female breast, though it is also found in the rectum, eye, testicle, womb, shin, bones, and salivary glands. Its chief feature is its stony hardness, which is due to an abundance of fibrous tissue; it is nodulated, becomes adherent to the overlying skin, and it has the singular property, not possessed in a like degree by any other tumor, of drawing into it adjoining structures, is subject to severe stabbing or lancinating pain, and to ultimate ulceration. *Medullary*, or brain-like cancer, so called from its resemblance to the substance of the brain, or stiff blanc-mange; encephaloid, or soft cancer, are its synonymous terms. This form of cancer differs from the preceding in possessing none of that peculiar characteristic of drawing towards itself neighboring structures, but rather that of a disposition to distend and thrust them aside by the *rapidity* of its growth, and by the great accumulation of cancer material in its bulk. It produces greater constitutional disturbance, and is more speedily fatal. It is most frequent in the limbs and breast. It is excessively vascular and as it nears the surface throws out fungous masses which bleed at the slightest touch. *Melanotic Cancer:* The distinctive feature of this form of cancer is the presence of pigment or coloring cells, which give it a black or dark appearance. The most frequent situation is the skin or the eye, and it is more common in the horse or dog than in man. It derives its color as a general rule, from the

structures in which pigment naturally exists. *Epithelial Cancer*, termed also epithelioma or cancroid, so termed because the microscopic cells found in it differ less from the cells of the part in or near which they grow, than those of the foregoing kinds, and from their analogy to the *natural* epithelial structures. Its chief situation is in the skin, in or near a mucous orifice, *e. g.*, lip, nose, anus, prepuce, scrotum, or tongue. When it exists on the scrotum it forms the so-called chimney-sweeper's cancer, *Osteoid Cancer*, a form of cancer occurring usually in bones, and more commonly in the lower end of the femur apparently than elsewhere. It is very rapid and painful in its growth. In this form of cancer the *stroma* is converted into a very dense fibrous tissue, and then into a peculiar bone, which is rough and porous, and very brittle, readily reducible to a chalky powder after maceration of specimen. It seems to be singularly interchangeable with encephaloid. *Colloid Cancer*, a form of the disease not regarded by some writers as includable under the term cancer. In appearance it is jelly-like, about the consistence of thin glue or tapioca pudding, of rapid growth, and frequently attaining enormous bulk. It is most frequently found in the intestinal canal. *Villous Cancer*, a vascular growth, composed of delicate papillæ, each containing a vascular loop, generally in connection with cancer or epithelium.

Treatment.—All that can be done in the way of treatment is to check the disease as far as possible, and thus endeavor to alleviate suffering and prolong life. Active treatment of cancerous growths can only tend to one point, and that is removal in all cases on their earliest detection. In advanced stages of the disease, palliative treatment, both local and constitutional, must be resorted to, but death will sooner or later supervene, and all that can be done is to make the end as easy as possible. Medical advice is absolutely necessary.

CANDLES.—Kerosene oil and the various kinds of lamps in the country, and gas in the city, have very nearly superseded the use of candles as illuminators; yet they are cleaner than lamps, less troublesome, less dangerous, and more easily carried about. They also, when properly made, give a peculiarly pleasant and cheerful light at very small cost. Candles are made of various substances such as spermaceti, stearine, tallow, wax and various combinations of these; but the last two are the only substances used in domestic manufactures, and they are made in two ways—by *dipping* and by *moulding*.

Dipped Candles.—To make dipped candles, pull the wicks out straight and smooth, cut into the right length, and then put them on broaches or rods about half an inch in diameter and three feet long. First dip the wicks in lime-water or vinegar and dry them; then double them over the rods and twist them. Melt the tallow in a large kettle, and when it is melted, fill the kettle to the top with hot water and add wax and powdered alum to harden the candles. Keep the tallow hot over a *portable furnace*, and fill the kettle with hot water as fast as the tallow is used up. When the tallow is boiling hot take several rods at once and wet the wicks in it; straighten and smooth them when cool. Then dip them as fast as they cool until they become of the proper size; plunge them in obliquely and not perpendicularly, and when the bottoms are too large, hold them in the hot grease till a part melts off. Let them remain over night to cool; then cut off the bottoms and keep in a dry, cool place.

Mould Candles.—These are made in regular candle-moulds or tin or pewter cylinders, of which the inside diameter is the size of the candles desired. To make, melt together ten ounces of good tallow (at least half should be mutton tallow), a quarter of a pound of white wax, a quarter of an ounce of camphor, and two ounces of powdered alum. Soak the wicks in lime-water and saltpetre, and when dry fix them in the moulds and pour in the melted tallow. Let them stand one night to cool; then warm them, draw out carefully, and put them in a box in a dry, cool place. Candles made thus are extremely nice and will keep for two years; they are better for being kept several months. When laid up for store, it is well to cover them with bran, as light turns them yellow.

Rush Lights.—These are made by dipping rushes in tallow in the same way as for dipped candles. The rushes should first be stripped of nearly all the hard, outer covering, the pith alone being retained with just enough of the tough bark to keep it stiff. They require no snuffing as the burned wick falls off as the tallow consumes; but small cotton wicks answer the same purpose and are less liable to go out.

Wax Candles.—These are much superior both in appearance and in illuminating power to any others. They burn with a steady, mellow light, emit no smell, and require no snuffing. They are made by pouring melted white wax down the wick till sufficient has adhered to it, then rolling the candle on a smooth board or marble slab till it is even, and then polishing it with a cloth. They may also be made like tallow candles in moulds. Exposure to the light whitens wax candles, but they should always be kept in a cool, dry place.

CANDY.*—In order to understand the philosophy of candy-making, take a little crushed sugar in a clean brass or tinned kettle, with a little water, over a brisk fire, and note the changes which heat will cause. At first the lumps of sugar soften and break up, and as the heat increases entirely disappear, the result being a transparent solution, more or less thick according to the proportions of sugar and water. If heat be increased so that the syrup boils,

* Most of this article, and of two or three short paragraphs on allied topics, are taken from an excellent little book, "How to Make Candy." Hartford, Ct.; Dustin, Gilman & Co.

the remaining liquid becomes more dense until it reaches a point where not enough water remains to hold the sugar in perfect solution. If it now be set aside and allowed to cool gradually, the excess of sugar will deposit itself in large transparent crystals on the sides and bottom of the vessel, and we shall have it in the form usually known as rock-candy. If instead of setting the solution aside for the crystals to form, we continue the boiling, nearly all the water will soon evaporate, and the sugar will manifest a tendency to assume a granular condition, especially upon the sides of the vessel. A few degrees more of heat beyond this point, and we have the sugar in a melted form, of a thick, pasty consistence, but clear and transparent still. If we dip a spoon into the mass and withdraw it, a long thread of melted sugar will follow, and if the portion be dropped into cold water, it will at once become hard and brittle. It is from sugar in this state that the greatest number of our candies are produced. But just here we must be very careful in the management of our heat. If that is now allowed to increase but a little, the mass becomes very dark colored, froths, acquires a bitter taste and is not fit for use. It is above 260° that the sugar is thus changed and the greatest skill is required to push the heat of the boiling sugar just as near the point of this change as possible without quite reaching it. The greater part of hard boiled candies are made at about 250° of heat. If made at a degree much less than this they soften or change in structure, while the nearer the heat can be carried to 260° the longer do they retain their hardness and transparency. At the present day hardly a kitchen will be found without some cooking utensil which may be conveniently used for making candy. A sauce-pan of tinned iron with a handle and flaring sides, and a lip to facilitate the pouring of the contents will be found best adapted for such use or a small brass kettle will do very well if kept quite clean and bright.

General directions for Candies of any flavor from Boiled sugar:—Take three and one-half pounds of refined sugar, one and one-half pints of water, and one teaspoonful of cream of tartar. Mix in a vessel sufficiently large to allow for the expansion of the boiling candy. Boil over a brisk fire, taking care, however, that the sugar does not burn. The heat should be applied to the bottom only, and not to the sides of the vessel. After boiling for about fifteen minutes, a small portion of the melted sugar may be removed with a spoon and cooled by placing in a saucer surrounded by cold water. If when cooled it forms a viscid, tenacious mass, and if a portion taken between the thumb and finger forms a long adherent thread when the thumb and finger are separated, the process of boiling is nearly completed, and great care must be used in the further management of the heat, enough being supplied to keep up the boiling without allowing the sugar to be burned. It must now be tested every few minutes by dropping a small portion into some cold water standing conveniently near. When the portion so dropped becomes at once hard and brittle, snapping apart like a pipe-stem when bent, the process is completed, and the vessel should at once be lifted from the heat. Any desired flavoring or coloring "extract" can now be stirred in according to taste. It is next poured into shallow earthen dishes, which have previously been slightly greased, and allowed to cool to a degree at which it can be handled without discomfort. It is then to be "pulled," and after pulling rolled into "sticks" like those ordinarily sold, or made into any other desired shape.

Below are given some recipes for candies not included in these general directions.

Chocolate Caramel.—(*See* CARAMEL.)

Cough Candy. — Boil three and one-half pounds of ordinary brown sugar with one and a half pints of water until it hardens when tested in the usual way. To this add, just prior to removal from the fire, a tincture prepared thus: To one-half ounce of strong alcohol add one dram of camphor gum, when dissolved and two drams oil of anise, four drams strong tincture of capsicum, one dram of benzoic acid. Another very popular form of cough candy is prepared by making a decoction, by boiling two ounces of boneset and one half ounce of ground bloodroot in a pint and a half of water, and using this decoction with three and one-half pounds of brown sugar, in the same manner as directed for horehound candy. When about to be poured out in trays or worked, it may be flavored with oil of anise.

Fig Paste.—(*See* FIG.)

Ginger Candy.—Put into a preserving kettle one ounce of finely grated ginger, one pound of sifted loaf sugar, and enough water to dissolve the sugar; put the kettle on a slow fire till the sugar begins to boil; add another pound of finely sifted sugar, stirring it in till it thickens; then drop it in cakes on plates and dry them in a slow oven. They will be hard, brittle, white, and very palatable.

Gum Drops.—Take one pound of gum arabic, dissolve it in 1½ pts. of water, strain and add one pound of refined sugar. Heat until the sugar is entirely dissolved. Any flavor may be obtained by using enough of the desired flavoring extract to suit the taste, and a little color may be added if wanted. These should be added while the mixture is warm. The mixture should be evaporated until of the consistence of honey, so thick that it will flow only very slowly from the lip or spout of the vessel containing it. Next fill a shallow box with fine starch, and having smoothed the surface, proceed with a stick, having a rounded end, of the size desired in the finished gum drop, to make indentations in the starch, as thickly together as can be done without disturbing the shape of one by the formation of another. Round buttons of wood may be fastened to a flat board, if desired, and the entire

set of indentations prepared at once by pressing the board on the surface of the starch. The mixture of gum and sugar should now be placed in a vessel having a long lip or spout, and as the liquid is poured slowly out, a portion just sufficient to fill each indentation should be stroked off with a wire and allowed to drop therein. When the mould is filled it must be set in a warm place for several days, until the drops are sufficiently hardened on the outside to bear handling without breaking.

Horehound Candy.—Prepare a strong decoction by boiling two ounces of the dried herb in a pint and a half of water for about half an hour. This decoction is then strained and added to three and one-half pounds of *brown* sugar. Boil over a hot fire until it reaches the requisite degree of hardness, when it may be poured out in flat tin trays, previously well greased and marked into sticks or small squares with a knife, as it becomes cool enough to retain its shape.

Jujube Paste.—Take of gum arabic one pound; dissolve in a pint and a half of water and add one pound of sugar. Evaporate to a very thick consistence, and when cooled a little, but while still warm enough to run, turn into shallow tin pans which have previously been oiled. Any flavor may be added before turning it out.

Lemon Candy.—Into a bright tinned kettle, thoroughly cleansed to free it from grease or odor of vegetables if a kitchen utensil is employed, put three and one-half pounds of sugar, one and one-half pints of water, and a full teaspoonful of cream of tartar. Place over a hot fire and stir until the lumps disappear. Boil briskly, until the candy becomes hard and brittle, when a little of it is thrown into cold water; remove the vessel from the fire and pour the contents on a large earthen platter, previously greased with a little butter. After the candy has cooled sufficiently to be handled, and has reached the consistency of ordinary dough, add about a teaspoonful of finely-powdered tartaric acid, and the same quantity of extract of lemon, and work them into the mass. The acid should be very fine and free from lumps. The mass should be worked enough to distribute the acid and lemon extract evenly, but no more, as too much handling would tend to destroy its transparency. It may now be formed into sticks or drops or spread out flat in thin sheets, which will easily break as required when cold. Some makers add a few drops of tincture of saffron just before removing from the fire, which gives a bright yellow color, without diminishing its clearness.

Molasses Candy (I).—Into a kettle holding at least four times the amount of molasses to be used, pour a convenient quantity of good Porto Rico molasses. Place over a slow fire and boil for a half hour, stirring all the time. Be very careful not to let the candy burn, especially near the close of the boiling. When a little dropped in cold water becomes quickly hard and snaps apart like a pipe-stem, add a teaspoonful of carbonate of soda, free from lumps, to every two quarts, stir quickly to mix, and pour on greased platters to cool. When the candy is sufficiently cool to handle without burning the hands, it is pulled back and forth, the hands being rubbed with a little butter to prevent the candy from sticking to them. Flour is sometimes used for this purpose, but it gives an unpleasant taste to the candy. The more the candy is worked, the lighter it will be in color. Frequently some flavor is added, as vanilla or lemon, but the natural flavor of the boiled molasses is generally preferred.

Molasses Candy, (II) (White).—Take two pounds of refined sugar of the grade termed by the grocers "Coffee C.," one pint of pure sugar-house syrup, and one pint best Porto Rico or New Orleans molasses. Boil together until it hardens, as before described, when dropped in cold water, add one teaspoonful of carbonate of soda, and work in the usual manner. This style of molasses candy is that made by the large confectioners, and is, in fact, a sugar candy flavored a little with molasses.

Nut Candy.—If the meats of the nuts are covered with a thick skin, like those of almonds or peanuts, remove it; with walnuts, pecan nuts, etc., this is not necessary. Pour over them the hot molasses candy made as above directed, stirring the meats that each one may be covered. A little less candy should be used than will suffice to entirely cover the mass of meats, though each separate one should be coated. Thus will be formed a large cake, which when nearly cold may be divided in squares or bars with a sharp knife. The meats of any nuts may be used in this manner.

Sugar Candy.—Take three cupfuls of fine sugar half a cupful of vinegar, and two cupfuls of water, and boil pretty fast till the water all boils away; in fifteen or twenty minutes afterwards it will candy (test by dropping some in cold water and trying if it will "string" when pulled). Then pour into a buttered dish, and when it cools sufficiently to be handled, pull in the same way as molasses candy. This makes a very white and pleasant candy; but *great care must be taken not to move or shake it while boiling.* If this happens it will re-crystalize into sugar.

Taffy (Plain).—Either kind of molasses candy, if poured from the kettle into tin trays without working, will produce a fine, plain taffy. It may be left in one sheet, the size of the tray in which it is poured, or, when slightly cooled, may be marked off in squares.

Taffy (Everton).—Take three pounds of best brown sugar, and boil with one and one-half pints of water, until the candy hardens in cold water. Then add one-half pound of sweet-flavored fresh butter, which will soften the candy. Boil a few minutes until it again hardens, and pour into trays. Flavor with lemon if desired.

Walnut Candy.—The meats of hickory nuts, English walnuts, or black walnuts may be used, according to preference in that regard. After removal from the shells in as large pieces as practicable, they are to be placed on the bottoms of tins, previously greased, to the depth of about a half-inch. Next boil two pounds of brown sugar, a half-pint of water, and one gill of good molasses until a portion of the mass hardens when cooled. Pour the hot candy on the meats and allow it to remain until hard.

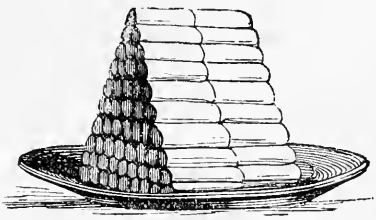
Cheap Candy.—A great deal of candy has of late been offered at extremely low rates, from twenty to twenty-five cents per pound below the usual retail price. It is generally composed of many varieties, principally, however, of those which offer the largest opportunities for adulteration. The bonbons and similar candies of this kind are composed of a mixture of terra alba and cheap sugar, the gum drops of cornstarch, and the stick candies of starch sugar. The nuts and fruits used in the cheaper varieties are of poor quality, worm-eaten, old or damaged. It will be much the better way, if economy is an object, to prepare the simpler varieties at home.

CANDYING FRUITS.—Fruits of every kind may be candied by first boiling them in syrup, and then taking them out and drying them in a pan on the stove or before the fire; then boil the syrup to a candy, dip the fruit into it once more and again set the fruit on the stove to dry; then put it into boxes or patented jars and keep in a dry place. If put into the patent jars the fruit will keep a long time. Grapes, currants, and the various kinds of berries may be candied by simply dipping them into the candy and drying them carefully.

CANDY-TUFT.—A fine, hardy, freely-blooming annual, with pretty bush, and white, red, and purple flowers. Plant the seed in open border or in beds, as soon as the frost is out of the ground; they will bloom earlier if they are sown in the autumn, and the frost and snow will not injure them. They are in flower from June to September, and may be kept over to next season by cutting off the flowers, not allowing the seed-pods to form, and keeping them housed during the winter.

CANNEL COAL.—A variety of bituminous coal which burns with such a brilliant white flame that it is used for affording light by the poorer people of the north of England; hence its name, "cannel" being the local pronunciation for "candle." It does not soil the fingers, is heavier than other coal, and is peculiarly pleasant for burning in open grates. As it is apt to split and fly out when put into the fire, it is best to mix it with common coal in use. Cannel coal is brought from England and sold at about three times the price of anthracite; there is an American variety which is nearly as good and costs less. It is mined in several places in Kentucky, and from the Leavenworth bed in Kansas. It is more variable than any other kind, often changing in the same bed from very coarse and earthy to the finest.

CANNELONS.—Roll out very thin and evenly some fine puff-paste into a long strip of from three to four inches wide, moisten the surface with a feather dipped in white of egg, and cut it into bands of nearly two inches wide; lay some apricot or peach marmalade equally along these, and fold the paste twice over it, close the ends carefully, and when all are ready, slide them gently into a pan of boiling lard; as soon as they begin to brown, raise the pan from the fire that they may not take too much color before the paste is done quite through. Five minutes will fry them. Drain them well, and dry them on a soft cloth before the fire; dish



Cannelons.

them on a napkin, and place one layer crossing another, or merely pile them high in the centre. If well made, and served of a light brown and very dry, these cannelons are excellent: when lard is objected to, dripping may be used instead, but the paste will then be somewhat less light. Only lard of the purest quality will answer for the purpose.

CANNING FRUITS.—Canned fruit of every kind, preserved by various patented processes, can be bought in the shops; but they may also be put up at home without difficulty. The principle involved in preserving by canning is the entire expulsion of the air; this is usually effected by heat sufficient to cook the fruit. The best "cans" for family use are the patent glass jars with cover and india-rubber band, which may be had now of every size and at low prices; those are best in which the rubber encircles the outside of the jar's mouth without coming in contact with the fruit. For the smaller fruits, which break easily by handling when cooked, it is best to put them into the jars before cooking; fill up with water, and set them in a wash-boiler containing water enough to come up about three-fourths of the height of the jars. The jars must not rest directly on the bottom of the boiler, as they are liable to break. Bring the water gradually to a boiling point and let it boil steadily but not violently from five to ten minutes. Then take the cans out, place them on a cloth or board, and shake them well to loosen the bubbles; fill them up to the brim with boiling water, and adjust the cover. The amount of air under the cover should be so slight that it will be expelled by the steam from the hot fruit in the act of sealing.

If there is no desire to preserve the fruit whole, the process may be much simplified by

cooking the fruit in the ordinary way and dipping it hot into the jars. In this case the jars must be prepared by heating them gradually with hot water, or they will break when the hot fruit is put in. Plenty of juice should be dipped in at first, so as to leave no vacancies for the air, then the jars may be sealed as soon as they are filled; but if there are bubbles, let them out with a fork or spoon, fill with hot juice and seal. When cooled an hour or so, screw the covers tighter, if possible, or see that they are on firmly. Let the fruit stand in sight for a week or two, and if it does not ferment in that time put away in a dark, dry closet, and it will keep for years. If in cooling, the fruit settles, leaving a vacant space at the top, that is not necessarily air, and the jars must not be opened unless signs of fermentation are seen. Then open promptly, fill up with boiling water and reseal; or, better still, eat it up, and use the jar for other fruit.

CANTALOUPE. (*See* MUSK-MELON.)

CANVAS.—The ordinary canvas is the coarsest cloth made of flax, and the rough, unbleached varieties are made of hemp. It is used chiefly in manufacturing sails for ships, tents, and the like, but is also very useful in the household for making large bags or anything else for which exceptionally strong cloth is required. There is also a light kind of canvas, woven with the warp and woof at intervals, which ladies use for tapestry and Berlin wool work. That which is flexible is best.

CANVAS-BACK.—One of the family of sea ducks, and celebrated as the most delicious of all water fowl. They are in season from about the middle of November to January; and then, provided they have been killed in the neighborhood of Chesapeake Bay, where alone they can find the wild celery which is their peculiar food, they are very fat and tender, and with that delicious flavor so much admired. If taken at any other season and place, they are but little better than some of the common sea-ducks. The bill of the canvas-back is black, about three inches long, and nearly in a straight line with the head; the head and neck are red, the tail is short, and the back partly white and partly black. In choosing, select those which are heavy; if on feeling behind their legs they are found to be plump and full, they are fat and in good condition. For directions for cooking, *see* DUCK.

CAOUTCHOUC. (*See* INDIA-RUBBER.)

CAPERS.—The unopened buds of a low, trailing bush which grows wild in Greece and the Levant, and is extensively cultivated in the south of Europe. They are pickled in salt and vinegar, and come to us from Italy, Sicily, and France; the best are the *Toulon capers*. Capers are much used in cookery for making sauces. (*See* SAUCE.)

CAPES.—Under this head are included berthas, canezous, fichus, mantillas, chemisettes, etc. The measures required are: * 1. That of the length desired; 2. The size of neck (XV.); 3. The length of shoulder (XIV.); 4. The breadth of shoulders (XVI.) To prepare the pattern, draw the vertical line *a b* (Fig. 1),

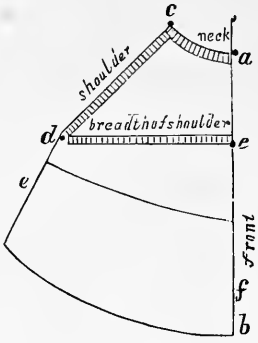


Fig. 1.

which marks the middle of the front; the third of the neck measure (XV.) is allowed for the distance between the points *a* and *c*; at *c* apply one end of the measure of the shoulder length (XIV.) and mark at the other end the point *d*, which is to be distant from the opposite point *e*, in the vertical line *a b*, by a space equal to one-fourth of the measure of the breadth of the shoulders (XVI.). The back is designed in the same way, with the exception that for the neck, one-sixth of the neck-measure is taken, instead of one-third (Fig. 2).

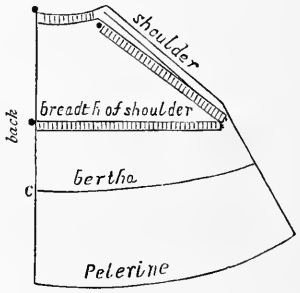


Fig 2.

The pattern represents the simple pelerine or cape suitable for a morning dress, or the wrapper of an invalid or an old lady, the inside lines being the length suitable for a bertha, which may also be cut out in the neck, and adapted to a low-necked dress. The outline of the pelerine and of the bertha may be varied on the lower edge, being cut round, square, pointed, longer in the back or front, or prolonged in front in square tabs, as a mantilla. The *fichu* requires the fronts lengthened in such a manner as to cross on the breast, be fastened at the waist, or made long enough to

* For explanation of Roman numerals, *see* CUTTING AND FITTING.

meet in the back and be knotted together or fastened with a pin.

Capes of this description have a seam upon the shoulder, but the garment may also be cut after the pattern of the circular (*see* CIRCULAR), in which case it is made in one piece; either way, however, the material from which the cape is to be cut should be folded double lengthwise, and the middle of the back of the pattern laid upon the fold.

CAPILLAIRE.—A kind of syrup which may be made thus: Put six pounds of loaf sugar and two of brown, and three eggs well-beaten, into three pints of water; boil it up twice, skim it carefully, and then add half a gill of orange-water; strain it through a piece of fine muslin, and put it into bottles for use. A spoonful or two of this syrup put into a glass of warm or cold water will make a very agreeable drink.

CAPON.—A young male fowl which has been castrated and fattened for the table. Caponed fowls are considered great delicacies, and always command the highest market price; they are said to combine the strength of flavor of the male bird with much of the delicacy of the female, and never to get tough like the ordinary fowl. The best fowls for the purpose are the large, square, heavy-bodied kinds that have a rapid growth. The signs of a capon are a small head, comb quite pale, short and withered, the neck-feathers, if left on, longer than usual, and, if quite young, smooth legs and short, soft spurs. The body is larger, fatter, more plump and round than that of the common fowl. Capons are cooked and served in the same way as ordinary Chicken.

CAPS.—To design a pattern for a cap the only measure required is taken around the head, in a straight line, meeting upon the forehead. This measure we now divide, and cut a square of paper of the dimensions of half the measure, as is seen underlying the various patterns outlined in Figs. 1 and 2. This we divide in the middle by the line *a b*, one-half representing the front, the other the crown of the cap.

The front is to be cut out, following the inner line *c d*, more or less, according as the cap is to be worn more or less forward upon the head; and between the points *d b*, to give room for the neck. At the point *d*, we may enlarge at will, forming tabs to float or tie under the chin, or may cut the corners off, and attach ribbons. Also the front may be much less than half the cap, and in this case, the crown must be correspondingly more than half, that the proper proportion may be preserved.

In Fig. 1, many models are represented. No. 1. By rounding the upper corner *e* of the crown, in accordance with the dotted line, which marks the outline of this first pattern, we have a very simple cap, which is left sometimes quite square except the curves *c d* and *d b*. To make up this pattern the material is cut in two pieces, which are obtained by laying the pattern upon the material folded double, the straight way. The two halves are now united, following the dotted line. The front, *c d*, and neck, *b d*, are hemmed or faced with a narrow strip, and the lower edge of the crown is gath-

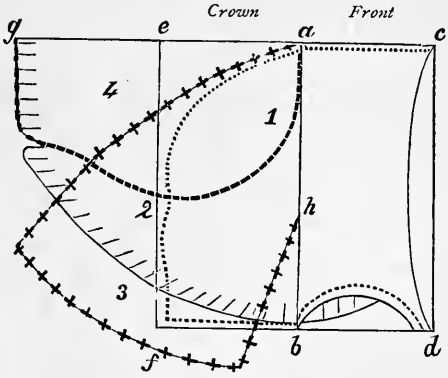


Fig. 1.

ered, and a little bias strip, hemmed on the lower edge, is added as a frill. This cap, cut out and made plainly, is the simplest form of a night-cap. On the other hand, made in delicate material, trimmed with lace or ribbon ruches, with lengthened tabs, it is an extremely quaint and pretty morning cap. The same pattern made up in silk or velvet becomes the Alsatian cap, suitable for children or for fancy dress. It is, however, very much cut out in front, and is nearly all crown; these caps are lined, and the gathering at the edge of the crown is concealed under two lengths of very broad ribbon, which cross on the top of the head and are tied in an enormous butterfly bow.

No. 2. The crown in this pattern is enlarged to nearly twice the original size, and is rounded from *g* to the point *b*. This cap is cut in one piece, the pattern being laid on the double fold of the material, straight way, the line *c g* on the fold. The edges of the front are hemmed from *c* to *d* and to *b*; the edge of the crown is gathered and secured or held by a drawing-string, which may be tightened or loosened at will. The *capeline* is made after this pattern by enlarging the front on the top, and if it be desired to turn it back from the front, it must be still more enlarged.

A very simple way of making a *capeline* and a cape in one piece is to take a square of the desired material, fold it bias, making two triangular pieces, then gather it along this diagonal, and raise one-half over the head, the point coming upon the forehead, while the other is drawn around the neck as a pointed cape.

No. 3. This pattern is the same as No. 2, except that it is cut bias, and the crown is smaller in the lower part.

No. 4. This is a pattern much used for children's caps. It is cut in two pieces, and the front is half the breadth of the cap. The crown, cut the straight way of the material, follows the line from *g*, and is gathered into the front,

being much more full below than near the top.

(Fig. 2.) The first of these patterns represents the crown very large, and the front correspondingly reduced. The front may almost disappear and become only a sort of binding to retain the gathers of the crown. The latter is cut rounding, and the double line marked "*gathering*" in the pattern is left for the back of the neck, while the rest of the crown is gathered into the front and must have a third more length than the space of the front upon which it is to be gathered. The second pattern, indicated by the scalloped edge, represents simply a *fanchon*, having no crown whatever.

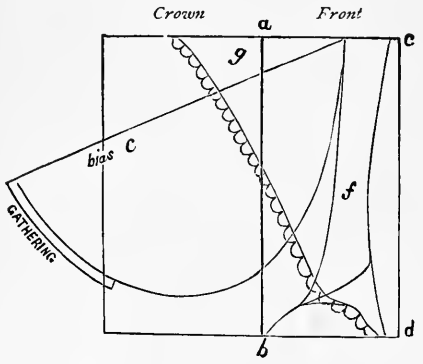


Fig. 2.

In the construction of these caps, many varieties may be introduced in the size of the crown and of the front, beside those we have indicated. When the cap is made in one piece, a front may be simulated by ruches of lace or ribbon. Again, the crown and front may be separated half way up, the crown be cut somewhat longer than the front and gathered upon it, and the seam be hid by lace arranged in accordance with the general style of the cap. As a rule, it should be remembered, that the trimmings of a cap should be always more and more simple as the wearer grows older; and that thread lace and blonde are more suited to almost any complexion than artificial flowers, or glittering bead-trimming.

CARAMEL.—A dark brown substance produced by the action of a high temperature upon melted sugar, and sometimes called "burnt sugar." It is used to color broth, sauces, gravies, etc., and may be made thus; Heat half a pound of brown sugar in a small iron kettle and stir until it is a smooth, dark-brown batter, but be careful that it does not burn; add gradually a pint of hot water, let it simmer while the sugar which is scraped from the kettle dissolves; then bottle and cork.

Chocolate Caramels.—Boil one quart of good New Orleans molasses until it hardens when tested by cooling a little of it in water. Just before removal from the fire add four ounces of chocolate finely and uniformly grated. Pour a thin layer into tin trays, slightly greased, and when the surface of the candy hardens a little, work with a knife into squares. They may be flavored with vanilla or almond if desired, but the natural flavor of the chocolate and molasses is generally preferred without addition.

CARAWAY.—This plant grows wild in England and throughout the north of Europe, and is cultivated here on account of its seeds, which are much used in confectionery, cakes, biscuits, and the like. The seeds have a pleasant, aromatic odor, and a sweetish, warm, pungent taste; and, besides cookery, are employed in medicine to stimulate the action of the digestive organs. The under leaves, when young and tender, are sometimes used for flavoring soups; the roots were formerly eaten as parsnips, and by some are thought to be not inferior. Caraway is cultivated exactly like the parsnip. The seeds mature the second year of the growth of the plant, and ripen in autumn.

CARBOLIC ACID.—A substance extracted from coal tar, and now much employed in medicine and the arts. It is one of the best of disinfectants, and being very volatile it is readily diffused through the air and neutralizes any excretions or gases that may be present. In using as a disinfectant for sinks, water-closets, night-stools, or for wetting a sheet to hang in the doorway, mix a wineglassful with a half a pint of warm water. For washing walls, furniture, etc., mix a wineglassful with a pint and a half of warm water. Owing to its antiseptic qualities, carbolic acid is a valuable lotion for wounds which discharge purulent or other offensive matter. When dissolved in 230 parts of water it is used as a gargle; or in 25 parts of water for painting the throat in bronchial affections; or in 50 parts for a carbolic spray. Mixed with olive or other oils, or with glycerine in the proportion of 1 part to 25 it makes an excellent dressing for cuts and sores. Carbolic acid paper, which is much used for packing fresh meats, is made by melting five parts of stearine at a gentle heat, then mixing with it thoroughly two parts of carbolic acid, and subsequently adding five parts of melted paraffine; when melted apply it to the paper with a brush. Pieces of card-board saturated with the acid will kill flies more surely than anything else.

Carbolic acid is a violent poison, and must be handled with care. In case of poisoning by it, send at once to the druggist for *saccharate of lime*, and while waiting for it give castor oil and olive oil freely.

CARBUNCLE.—Carbuncles proceed from the same causes as boils, from which they only differ in being much larger and more deeply seated. They generally appear in the back of the neck, and are so extremely sensitive that the slightest touch or even breathing upon them causes intense pain. A carbuncle may be treated in the same way as a boil (*see* BOILS); but as under certain circumstances it

may endanger life, medical advice should in all cases be taken. In the absence of medical aid, the best local treatment is to lance the tumor freely, to let out the festered matter; and then to apply warm poultices. It is to be recollected that boils and carbuncles alike indicate a bad condition of the blood which should be rectified by a liberal but not rich diet, bitters, and by taking tincture of iron—fifteen drops in a little water three times a day. Acid fruits, such as sour apples, grapes, limes and lemons, may be eaten freely.

CARCEL LAMP.—A mechanical lamp in which the oil is raised through the tubes by clockwork, so as to continually overflow at the bottom of the burning wick, thus keeping it thoroughly saturated while the excess of oil drops back into the cistern, situated so far below as to cast no shade. It is wound up like a clock, and runs from six to eight hours, maintaining a constant flow of oil and giving out a clear, brilliant, and pleasant light. The cut shows the mechanism; *a* is the spring which forces the oil *p p* up to the wick, by pressure on the cylinder *g; d* regulates the amount of light. These lamps are excellent but expensive, costing from fifteen to seventy-five dollars, and requiring great care in the handling of them. If they get seriously out of order it may be necessary to send them back to the constructor in Paris.

Carcel Lamp.

CARDOON.—A species of the artichoke but much larger and taller; cultivated in the same way. The stalk part of the leaf, when properly blanched, is crisp and tender. Cardoons are used for soups, stews, salads, etc. To cook, cut the solid stalks of the leaves into pieces about six inches long and boil them in pure water till they are tender; when done cleanse them carefully of the slime and strings that will be found to cover them, and then put them in cold water and let them remain till wanted for the table. Then take them out and heat them with drawn butter or marrow. If this process is not followed they will be bitter and black. Cardoons are in season from September to March.

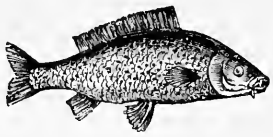
CARMINE.—The coloring matter of cochineal, used for dyeing fabrics, for making red ink, as a pigment in painting, and as a cosmetic. It is a beautiful crimson, blood-red color, the most expensive used in painting, and is generally sold already prepared. It is cheapest in the end to buy the best, as the cheaper kinds are frequently adulterated with extract of Brazil wood and cheaper vermilion. Carmine may be made in this way: Put two pounds of the cochineal powder into a pot containing ten gallons of boiling soft water; let it boil three hours, and then add three ounces of saltpetre, and soon after four ounces of binoxalate of potash. After ten minutes remove the pot from the fire, and let it stand for four hours. Then draw off the liquor with a siphon into flat glazed dishes, and let it stand in them three weeks. A coating of mould forms upon the surface, which is to be nicely removed in one piece; or if any fragments remain they must be taken out with the greatest care. Dry this cake in a clean shady place, and it will then be pure carmine ready for use.

CARNATION.—Carnations range next to roses perhaps as the favorite flower for garden culture, and whether in beauty or in fragrance are unsurpassed. Florists divide them into three classes—*flakes*, *bizarres*, and *picotees*. Flakes, on a pure yellow or white ground, have only one color, disposed in broad stripes and extending the whole length of the petal. The bizarres, on a white or yellow ground, have two or more colors in irregular stripes of pink, or scarlet and purple, sometimes running the full length of the petal, and sometimes broken into spots. The picotee has a white or yellow ground with the colorings confined to a bordering of each petal. In cultivation, carnations require a good rich soil: the best is composed of one-half rotten horse manure, one-quarter fresh loam, and one-quarter coarse sand, well mixed together. The compost sold by florists is also excellent for the purpose. They may be raised either from seed or cuttings. The seed should be sown in April or May, in pots filled with the above-described soil or compost, and a little fine sand, barely sufficient to cover them, sprinkled over the seeds. As soon as the young plants are three inches high, plant them out into a bed of rich soil. They will not bloom until the summer following, but the plants can be protected in cold climates by laying sods of grass over them, or by keeping them in the cellar in boxes. In raising carnations from cuttings, good healthy shoots should be selected about July or August; they should be cut off close to the old stem and planted in a box of sand, or sand slightly mixed with river soil, which should be kept constantly moist. In about three weeks the roots will begin to form and the cuttings may then be transplanted carefully to the garden. This is the surest way of propagating the choicer varieties. When the flower stems are ten or more inches high, they should be supported with stakes; and when the flowers appear, if there is danger of their bursting the calyx and thus spoiling their symmetry, it is well to tie a piece of colored worsted yarn around them.

Monthly carnations are the most desirable, as they bloom during the winter. These are some of the choicer varieties: *Admirable*, creamy white; *Astoria*, yellow, flaked with scarlet; *Betsey*, brilliant scarlet; *Blondin*, buff and rose; *Donadi's Pride*, white, edged with pink; *Grant*, rich crimson, striped with slate color; *Grand Conde*, white, blotched with rose; *La Purite*, bright rosy pink; *Ma Gloire*, sulphur yellow, striped scarlet; *Queen of*

Whites, purest white; *Radetzky*, rose color, with broad purple stripes; *Star*, carmine, splashed with white; *Von Moltke*, orange salmon, flaked with scarlet; *Rosaline*, bright buff, blotched with crimson; *Vaillante*, scarlet fringed; *Welcome*, brightest red, and of perfect shape.

CARP.—A fine and beautiful fresh-water fish, taken chiefly in the Hudson River, and especially abundant in the New York markets. They are in season from October to April.



Carp.

Their general color on the back is olive brown, with yellowish white under the belly, their fins are dark brown, and they have a small mouth like the sucker. They usually weigh from half a pound to three pounds, occasionally as high as twelve pounds, but the average is about one pound. The small fish are best for broiling and frying, and the larger ones for baking or boiling. Cook same as BLUE-FISH, and serve with anchovy, caper, or tomato sauce, or with parsley and butter.

CARPETS.—Before describing the various kinds of carpets there are one or two points to be considered. And first the material, colors, and pattern of the carpet must be adapted to the room into which it is to be put and the other furniture of the room. Large patterns will not look well in small rooms, nor will very small patterns look well in large ones; an expensive carpet renders it necessary to have expensive furniture; and every bit of color in the room, from the carpet to the ceiling, must have some harmony with every other. At the same time it must be borne in mind that there is harmony in contrasted colors as well as in those which are similar, and if the furniture is either very dark or very gay, the carpet should be either gay or neutral, in order to relieve the general effect. The large patterns which used to prevail have been discarded of late years; and patterns as small as the room will bear are considered most desirable. Medallion carpets, or those with figures of animals, bouquets of flowers, baskets of roses, or stripes, should never be chosen; the most pleasing figures are simple geometrical designs, a tracery of vines, arabesques, or an almost solid neutral groundwork of broken lines. A carpet with much white in it is objectionable anywhere unless the furniture is very dark, but it should never be laid in a room that is much used; on the other hand, a very dark carpet is almost as hard to keep clean. Carpets with blue or green, or any "delicate" color, fades on exposure to sunlight. A bordered carpet makes a room look smaller than it is; and a small room will look larger if the floor is covered with a carpet of neutral tint and small figures. (*See Carpets* under DECORATION.)

Cutting. — To determine the available length in making the carpet, unroll the equivalent of about twice the length of the room, double this in the middle, lay the edges side by side and pull the end to and fro until the patterns match at the length next greater than that of the room. Of this exact length, cut the requisite number of strips. It may be more economical to cut the lengths in the short direction of the floor. As there is carpet wasted it will be necessary to get more than the room would seem to require. This waste may be used for making rugs, ottomans, etc., or filling in recesses.

Sewing.—The strongest stitch for sewing carpets is the through-and-through stitch, and they should be put very close together; great care must be taken in sewing that the carpet does not pucker, and that the figures down the two widths are exactly matched. Binding is not generally used except in the case of Ingrain, or a close fit.

Before laying a carpet the floor should be made smooth, as boards warped upward at the ends or cracks wear the carpet through. Then it should be covered with a layer of newspapers, or better still, with a lining made especially for the purpose and consisting of cotton laid between two sheets of paper. This latter is moth proof, and a carpet put down with it will last much longer and be more easily kept clean. It is customary to fit carpets into all the recesses of the room, but this is most expensive and not really necessary. Where economy is an object, the carpet may be square or oblong, according to the shape of the room, but not fitted into the recesses; and the boards round the sides may be left bare or painted in oil, or covered with oil-cloth, baize, or drugget. As a still more economical mode, there may be a border only of carpet around the room, and the middle part may be covered with a drugget; this has the advantages, especially for dining-rooms and bedrooms, that it can be easily taken up to be dusted and shaken. It is somewhat the fashion now to dispense with carpets altogether in the sitting and reception rooms; and to have gay Persian or Turkish rugs distributed here and there over the bare floor, which is either stained or waxed and polished.

It is not desirable to have carpets on the floor in summer; they should be taken up and the floor either left bare or covered with Canton matting. Carpets get filled with dust, they add greatly to the warmth of a room, and if there is any taint in the air they are almost sure to catch and hold it. Moreover, they will last just twice as long if when warm weather comes on they are beaten, sewed up in coarse linen, and packed away in a dry place with some moth-repellant till the autumn.

To Clean.—Carpets should be taken up and beaten well (but not violently) at least once

a year. If they are much soiled they may be brightened up by scouring them in one of the following ways. No. II. is, perhaps, unnecessarily complicated. It is recommended, however, by an experienced English dyer and manufacturer, who some years ago published a valuable manual on the subject:

I Mix an oxgall with double its bulk of water, and apply it to the carpet with a sponge. Rub gently till a lather is produced, then wash off with clean water and dry with a linen rag.

II. Have the carpet taken up and well beaten, brushed, laid flat on the floor, and the spots taken out by rubbing a piece of hard soap on the greasy spot, and rubbing it out with a brush and clean cold water, well drying each spot as it is done, with a cloth before you leave it. Cut a bar of the best mottled (castile) soap into two gallons of water, and put it on the fire to dissolve. Take two pails of luke-warm water, and put in one of them two quarts of the melted soap. The other pail of warm water is to rinse out the carpet, which must be done at not less than one square yard at a time. Now dip a scrubbing-brush into the pail with the soap in it, and scour about a square yard while on the knees, and do it so as not to let it go through to the back of the carpet; when this yard is cleaned well with soap and a brush, rub the soap well out with a flannel or coarse sponge, and suck up in the sponge or flannel the wet and dirt that was made on the carpet by the scouring-brush, repeatedly rinsing the flannel in the pail of clean water. Have a pail of clean water with a little common soda. Rub a clean sponge, dampened with this, into the spot you have first cleaned and rinsed. Dry with a clean coarse cotton cloth, before you proceed with another yard.

III. Carpets may be cleaned without taking up, by sprinkling over moist tea-leaves and sweeping well; then grate potter's clay very thickly over the grease spots, cover them with a sheet of brown paper, and place a warm smoothing iron over them. Repeat till the grease is out.

IV. Corn meal sprinkled over and swept off with a slightly moistened broom will remove soot or other powdery dirt.

Moths will work in warm rooms in winter as well as in summer. A sure preventive is to pour strong alum water on the floor half a yard around the edges before laying the carpets, and once or twice during the season sprinkle dry salt over the carpet before sweeping. Sufficient will adhere to prevent insects alighting.

Axminster Carpet is expensive, but wears almost well enough to make up for it. There are French, English and American Axminsters in the market; they do not differ much from each other in cost, the price being from $3 to $5 a yard.

Brussels Carpet, on account of its durability, is probably the cheapest for general use. The basis is a warp and woof of linen thread; worsted threads are also interwoven, which are formed into loops by means of wires and form the patterns, the linen threads not being visible on the surface. When well made they are very durable, and, being at the same time elegant, are among the most desirable of all carpets. Good English Brussels is worth about $2.00 to $2.25 per yard, three quarters of a yard wide. American about $1.75 to $2.00. (*See Tapestry Carpet.*)

Dutch Carpet.—A cheap carpet woven in pieces about a yard wide. The warp is of wool and the filling of wool, hemp or cotton; and the only patterns are stripes and checks. This is very good for stairs.

Ingrain Carpet is, perhaps, most frequently used in bedrooms and the like. It is made of two threads only, and the colors are reversed on either side; in the best both threads are wool, in the cheaper kinds the warp is of cotton. The English Ingrain costs about $1.60 per yard; the American from $1.00 to $1.10. Yard wide.

Kidderminster Carpet.—This is made of two woollen webs which intersect each other at various points to produce the pattern, which is the same on both sides with the color reversed. They are woven in large squares to fit the room, and are of various qualities. A good article is worth about $2 per square yard.

Moquette Carpet is a very rich and beautiful French carpet made on same principle as Wilton.

Persian and Turkish Carpets.—These are unequalled for richness of fabric and patterns; they are woven with a soft pile like that of velvet, and some of the costliest of the Persian have floss silk mixed with the wool. The colors are indescribably rich and brilliant, and one of them spread upon the floor brightens up the most cheerless room. They are woven in one piece, and are from five to ten yards long, and from five to six wide. They are very expensive, and the finer qualities are appropriate only in elaborately furnished rooms.

Printed Felt is made of coarse wools brought together by the process of felting, and the patterns are imprinted in colors by means of the rollers on which they are cut. It is bright-colored but rather flimsy, and only appropriate for rugs, druggets, or table covers. It is of various widths. Price about $1 per square yard.

Rag Carpet is the lowest in price of all, and can readily be made at home on a hand loom. Use a warp of strong cotton threads, and weave in any kind of rags by twisting them up into small rolls. It is thick, and serviceable to spread over kitchen floors in winter. Price in the shops, about 50 cts. a yard—yard wide.

Tapestry Carpet is an imitation of Brussels, but only one woollen thread is used instead of four or five different colors. The warp is of coarse linen threads, and the pattern appears only on one side. Tapestry is very pretty, and in the best patterns is hard to distinguish from Brussels; but it is not durable and is liable to

fade. It is woven in pieces three-fourths of a yard wide, and costs about $1.25 per yard. Brussels is cheaper at twice the price.

Three-ply Carpets are the same as Ingrain, except that a third thread is added and this makes the pattern on the right side. It is the prettiest of the cheaper all-wool carpets; but as the single layer of threads on the surface is liable to wear off it is not so durable as Ingrain, and cannot be turned like the latter. Price about $1.30 per yard—yard wide.

Velvet Carpet is an English material in which the weaving is the same as tapestry; only the loops are cut, thus giving it a high pile like velvet. It has a rich and soft effect, and wears better than tapestry. Price about $2.50 per yard ¾ yard wide.

Wilton Carpet differs from Brussels just as velvet differs from tapestry; after weaving, the loops are cut with a sharp knife, and a pile like that of velvet produced. Wilton is perhaps the most beautiful and durable of all carpets. Price about $3.50 per yard ¾ wide. In *Royal Wilton* the pile is raised higher than in the common kind.

Wood Carpet.—This is a late invention. It is made of well-seasoned and kiln-dried hard woods, cut into strips one and one-eighth to one and three-eighth inches wide, and a quarter of an inch thick, and glued on to heavy cotton drill. The wood is then planed smooth and oiled. It rolls up like an oil-cloth, can be sent anywhere, and can be put down by any good carpenter. It can be laid to look like ordinary flooring of one kind of wood, or in fancy designs, centre-pieces, etc. That of one kind of wood, or of alternate strips of different kinds, is a yard wide and costs $2.00 a yard. The fancy styles cost from 50 cents to $1.25 per square foot. It is claimed for this carpeting that it is insect proof, that dust cannot penetrate it, that it is so thin as not to interfere with door-sills, etc., and that it is very durable; but it needs to be more thoroughly tested.

CARRIAGE (To Clean).—*See* CLEANING.

CARROT.—For garden purposes there are three different varieties of carrot, namely, the *Early Horn*, a small kind used for the earliest crops; long orange, or *Altringham*, a very large kind for ordinary summer and winter use; and *Purple* carrot, a French variety, of deep purple color and unusual sweetness. No vegetable is easier to cultivate than the carrot. The soil should be light and free from stones, and well broken up. Sow the seeds at intervals from the beginning of February to the end of August; press them down lightly with the feet, and then rake them in. When they have come up they require no further attention than to be hoed out to the distance of six inches apart, and kept free from weeds.

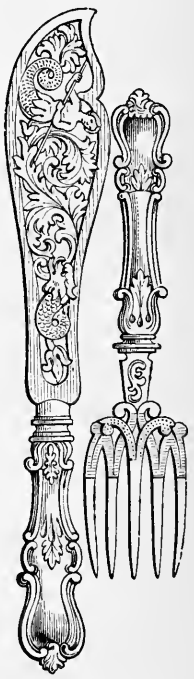
Young carrots appear in the Southern markets and are thence brought North about the 1st of May, and from that time on until November new crops continue to come in. They may easily be kept all winter, by burying them in sand out of the reach of the frost.

Boiled Carrots.—If the carrots are large, scrape them well and boil them in salt and water till soft; if old they will require from an hour and a half to two hours. When done, slice them lengthwise, butter well, and serve hot.

Stewed Carrots.—Scrape and boil till nearly done; then take them off, cut them into small squares, and put them into a sauce-pan with two small onions minced, a little chopped parsley, pepper and salt to taste, and half a teacupful of drawn butter. Let them simmer half an hour, then mash, dish and serve hot.

With Sugar.—Clean about a quart of carrots, slice them, set them on to boil for five minutes, and then remove and drain them. Put two ounces of butter into a sauce-pan, and set it on a good fire; when the butter melts, lay the carrots in, season with pepper and salt and a piece of grated nutmeg, and add about half a pint of broth (if you have no broth use half a pint of water with another ounce of butter); sprinkle in while stirring about a teaspoonful of flour, and boil gently till cooked. Remove from fire, mix a heaping tablespoonful of white sugar with the yolks of two eggs; add this to the rest, stir together, and serve hot.

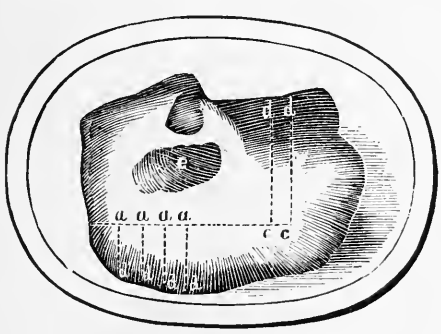
CARVING. — The first essential of good carving is a proper kind of knife and fork. The former should be very sharp, not too heavy, and of a size convenient to handle; the fork for carving meat and game should be two-pronged and have a finger-guard. The knife for fowls, game, saddles of meat, or anything requiring careful dissection (as distinct from slicing) should have a short blade that will not spring, and have its length keed out in the handle. A slicing knife for roasts, haunches, etc., should have a long, thin blade. For fish there is a special kind of knife and fork, made of silver or plated-ware, with a large, massive blade for the knife, and the fork also large, with five prongs, so as to raise a large flake of the fish without breaking it. The article to be carved should be placed in a dish sufficiently large to allow the joint to be turned; it should also be set firmly on the table, so near to the carver as to allow the free movements of the arms. Loins, breasts, and necks of mutton, lamb, and veal should be properly *jointed* by the butcher before they are dressed, else the



most adroit carver will be baffled. In carving and helping a joint, do not load a person's plate. If the meat attached to a bone be too much a small slice may be taken out between each two bones in carving. There are choice cuts or delicacies, with which a good carver has to become acquainted by experience. In helping fish, take care not to break the flakes, which in cod and fresh salmon are very large and contribute much to the beauty of their appearance. Help a part of the roe, milt, or liver, to each person. The heads of carp, part of those of cod and salmon, sounds of cod, and fins of turbot, are likewise esteemed delicacies, and should be served accordingly. Have your sauces or gravies passed separately, or, if that is impracticable, inquire the preference of each person. People lose much of the pleasure of a meal if their plates contain distasteful gravies.

Beef Tongue.—When sent to table without rolling, beef tongue is carved by cutting it nearly through the middle at thick part, leaving a small portion at the bottom to keep the two ends together. Many people like a little fat served with the lean, but others do not like its flavor. When the tongue is rolled and pressed, the knife is carried horizontally as in carving a fillet of veal.

Breast of Veal.—Cut from right to left parallel

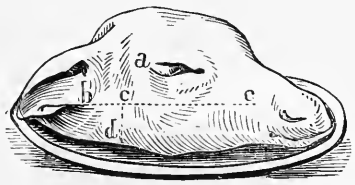


Breast of Veal.

with the lines *d*, *c*, then cross from *c* to the most distant *a*. The several lines marked *a*, *d*, represent the directions in which the brisket or gristly part should be divided; *d*, *c*, show the course of the ribs, and *e* is the sweetbread.

Brisket of Beef.—A brisket of beef should be carved in thin slices quite across the bone.

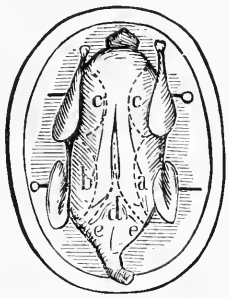
Calf's Head.—In boiled calf's head there are many choice parts. The first cut, *c b*, is along the fleshy part of the cheek bone. At the end of the cheek bone lies the *throat sweetbread*, which is considered the choicest part of the head; it is to be cut out in the direction *c d*. The *eye part*, also a delicacy, is cut out from its socket (*a*) by driving the point of the knife down to the bottom on one edge of the socket and cutting quite round, keeping the point of the knife slanting towards the middle. The *palate*, another much esteemed part, is found on the under side of the roof of the mouth—a thick, white skin which is easily cut away from the bone. On the under side, cov-



Calf's Head.

ering the jaw and near the ear, is some good meat and fat.

Chicken. — Fix the fork firmly into the breast, and on each side of it make a cut the whole length of the fowl, and parallel with the legs and wings. The wings are taken off in the direction *a b*, by dividing the joint with the knife and drawing it away with the fork. The legs may easily be removed by cutting the ligament at the joint *c*, and twisting the bone out of the socket. The wings and legs being thus separated from the rest of the fowl, the knife must be entered at the breast, in the direction *d*, by which the merrythought may be displaced, after the knife has been slipped under it and

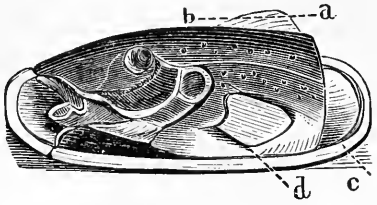


Chicken.

the bone lifted up and pressed backwards towards the dish. The collar-bones, *e e*, lie on each side of the merrythought, and must also be lifted up by the knife at the broad end and forced towards the breast bone till the part breaks off to which they were fastened. The breast is cut off by cutting through the ribs on both sides. The backbone is then turned upward and the knife passed firmly across it near the middle, the fork being at the same time employed in raising up the lower end towards the knife, and thus breaking the back almost in the centre. The lower end of the back is then turned from the carver, that the bones on each side may be taken off; the exact place in which these side bones are joined to the backbone will be easily found by the point of the knife. The choicest parts of the fowl are the side-bones, wings, breast, and merrythought;

the legs, except of young fowls, are considered coarse. The thigh, when separated from the drumstick, is sometimes preferred by those who consider the white meat of a fowl insipid.

Cod's Head and Shoulders.—This is the choicest portion of the cod, but very difficult to carve. The first piece should be taken off in the direction *a b*, by putting in the trowel at the back of the thick part of the fish; other slices may be cut in a similar direction. A



Cod's Head and Shoulders.

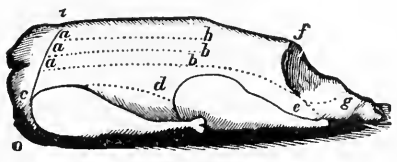
small portion of the sound should be given with each slice; it will be found lying close to the backbone on raising the thin flake *d*, and may be recognized by being transparent and of a darker color than other parts of the fish. There is also a part on the head, behind the eye, which is called the cheek, and much relished, as are also the palate, tongue, and jellied parts immediately around the jaws and bones of the head.

Duck.—Ducks when they are large, should be cut in slices like a goose (which see); when small they should be disjointed like fowls. If they are dressed with seasoning, this should not be distributed on the plates without first ascertaining that it is agreeable to the person to be served, as its flavor is not always liked.

Eels.—Cut into pieces through the bones; the thicker portions are considered choicest.

Fillet of Veal.—A fillet merely requires successive horizontal slices of meat to be taken off with a sharp knife, serving with each a small portion of fat and forcemeat.

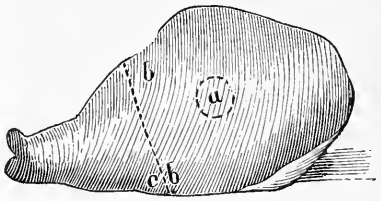
Goose.—This is considered the most trying task of the carver. Plant the fork firmly in the centre of the breast, turn the neck of the goose towards you, and cut the whole breast in slices on both sides of the bird. If more slices are required than the breast furnishes, turn the goose on one side and take off the leg by putting the fork into the small end of the leg bone, pressing it close to the body, and then, having



Goose.

passed the knife in the line *e b*, turn the leg back; if a young bird it will easily separate. To take off the wing, put the fork into the small end of the pinion and press it close to the body; then put in the knife at *c* and divide the joint, taking it down in the direction *c d*. When the leg and wing of one side are separated, go to the other. Cut off the apron in the line *f e g*; then take off the merrythought in the line *o i*. The neck bones are next to be separated as in a chicken, and all other parts divided in the same way.

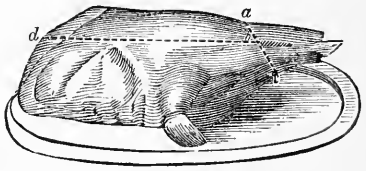
Ham.—A ham may be carved in three ways. 1st, it may be commenced at the knuckle and gradually worked up to the other end;



Ham.

2d, it may be cut in the middle and each side taken from until exhausted, taking care to carry the knife down to the bone in a perpendicular direction, as in *b c*; or 3d, a hole may be scooped out in the middle (*a*), and thin circular slices removed from around it. In any case, the slices ought to be thin and regular, which requires some practice; for the third method great skill is demanded.

Haunch of Mutton or Venison.—These are sent to table with the outside of the leg uppermost, and are both carved alike, being cut down to the bone in the direction of the line *a*, *b*, *c*, by which means the gravy escapes into the dish. The broad end should then be turned towards the carver, and deep cuts made



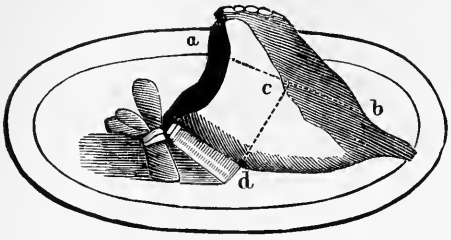
Haunch of Mutton.

from *b* to *d*; this gives with each slice a due proportion of fat, which lies chiefly on the left side of the line *b*, *d*. There is a delicious mine of kidney-fat in the loin of mutton under the flank, which is often too "high" in venison; but if fresh enough is even more rich and palatable in that meat than in mutton.

Knuckle of Veal. — A knuckle of veal cuts in neat slices in only one direction, namely, from *a* to *b*. The line *d c* divides two bones which it is necessary to separate in order to get at the best marrowy fat portion; also cut asunder the knuckle bones.

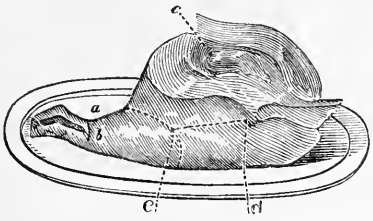
Leg of Mutton. — The first slice should be taken out as at *a*, between the knuckle *b* and

the thick end. Other slices may be cut in the same direction till the knife is stopped by the



Knuckle of Veal.

cramp bone *c*. The leg is then turned round and slices are taken lengthwise from the thick end towards the knuckle from *c* to *d*. The best slices from a leg of mutton are from the



Leg of Mutton.

upper end, though the parts about the knuckle are occasionally preferred.

Loin of Veal.—The loin is divided into the *chump-end* and the *kidney-end*. The latter should be cut across into portions, every other one of which contains a bone, the intermediate one being of meat only; the fat on the under side and the kidney should be served with each portion. The chump-end is served in slices, the bone being all in one piece.

Mackerel.—These are split at the tail, and the upper half raised at that part from the bones, after which the bone is removed from the lower half, and that in turn is served either in one piece or divided according to size.

Most other small fish are carved in the same way, that is either by taking out the back bone and serving whole, or dividing with the knife into sections according to size.

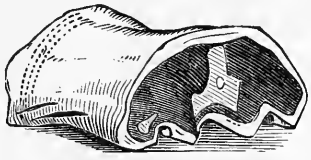
Partridge.—Cut up in the same way as a chicken. The choicest parts are the wings, breast, and merrythought; but the bird being small the two latter are not often divided. The wing is considered the best, and the tip is reckoned the most delicate morsel of the whole.

Pigeons, Quails, Woodcock, etc.—These are usually cut in half, either lengthwise down the back, or across just at the wings. The lower part is considered the best. All the smaller birds, if too large to serve whole, are cut up in the same way.

Ribs of Beef.—Carve in the same manner as the sirloin; this gives a due proportion of fat and lean to each slice, which should be thin and clean cut.

Round of Beef.—This is cut in the same way as a fillet of veal (which see). A deep slice should be taken off before beginning to help. When helping the fat be careful not to break it, but cut it smooth.

Saddle of Mutton is carved in three different ways: 1st, in longitudinal slices along each side of the backbone, by which the lean and fat do not come in the same slice; 2d, by transverse slices, taking in the bones, and



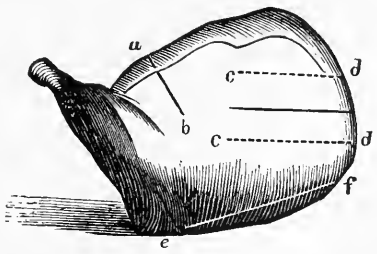
Saddle of Mutton.

which therefore must be thick and clumsy; and 3d, by oblique slices, slightly curved, which is by far the best plan. The knife begins at the bone near the tail, and after cutting off the outside, takes a series of parallel slices all through the joint, as marked in accompanying cut.

Salmon. — In carving salmon it is only necessary to avoid breaking the flakes, and this can best be done by carving lengthwise of the piece. The upper or thin part is considered choicest, but as some prefer the thickest portions it is well to ask each person which he prefers, and cut accordingly, making the slices rather thick. Or a thin slice of each may be served without inquiry.

Shad. — Cut in slices crosswise of the fish, breaking the flakes as little as possible. The thicker portions are considered choicest, as they have fewer small bones.

Shoulder of Mutton or Lamb.—This should be cut first in the hollow part, in the direction *a*, *b*, and the knife pressed deep to the bone. The best part of the fat lies on the



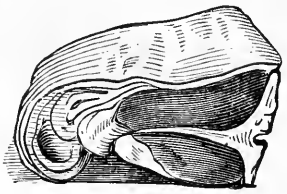
Shoulder of Mutton.

outer edge, and is to be cut in thin slices in the direction *f*, *e*. When the hollow part in the line *a*, *b* is eaten, some very good slices may be cut on each side of the ridge of the backbone, in the direction *c*, *d*. The line between these two dotted lines is that in the di-

rection of which the ridge of the backbone lies, and cannot be cut across.

Shoulder of Veal.—This is carved like the shoulder of mutton by some; but the best plan is to begin on the under side, and cut slices from the thick edge opposite the bone and parallel with it. When stuffed, a portion of the forcemeat must be served on each plate.

Sirloin of Beef.—This is usually carved by cutting the upper side in slices parallel with the bone and commencing at the edge, the brown of which forms the first slice. On the



Sirloin of Beef.

under side the knife is sometimes very unwisely cut into the grain, that is across the bone, by cutting through the middle down to the bone and removing the slices on each side. This part, however, tastes much better if cut on the same plan as the upper side, that is by commencing at the edge; but in this way the slices are small and do not look so handsome.

Sucking-Pig. — This requires very little carving, as the knife may be carried through any of its bones without much trouble. It is usual to divide it into sections, about two inches broad and including about three ribs in the middle, and a part only of the fore and hind quarters at each end.

Turbot. — The turbot requires peculiar carving, because, unlike other fish, its skin and fins are considered great delicacies. It is only necessary to carry the blade of the knife down to the bone along the middle of the back and then to make similar deep and clean cuts at right angles to this each way to the fins, a portion of which should be separated and kept with each square of fish, so as to avoid the breaking of the fins into pieces afterwards, which is by no means sightly.

Turkey.—The art of carving a turkey lies in cutting the largest possible number of slices. The best way is to pass a short knife clear down to the bone, close to the wing, and then take a thin slice out from between this and the breast, continuing the same plan until the whole is exhausted, after which the other side may be carved in the same way. In serving, a portion of the stuffing should be placed in each plate, and if there are sausages or balls, a part of each of them. When both sides of the breast are used up without all being helped, the legs must be taken off by carrying the knife backwards between them and the body, until it is stopped by the joint, when by means of the fork stuck in the leg it is severed from the body, the knife completing the removal by its edge. In dividing the leg into its two portions, the knife should be used against the inside of the joint, where it enters with much less difficulty than on the outside. If the bird is too small to be carved in this way, disjoint in the manner suggested for chickens.

CASEIN.— The principal constituent of cheese. It is easily obtained by taking the curd from milk and washing it repeatedly in pure cold water; it is employed in making cheese cakes and other agreeable dishes. When dried the composition resembles albumen and gelatin; and is very wholesome and nutritious.

CASHEW NUT.—This is a native of the West Indies, whence it is brought to our markets. It resembles the walnut in appearance, and has an agreeable, slightly acid taste. The eatable kernel is contained within two shells, and between the shells there is a thick rust-colored liquid, extremely inflammable, and so caustic that it will blister the skin. For this reason, the shell should be burned off before the nut is eaten; if it is incautiously crushed by the teeth or hands the caustic oil will blister the lips or skin wherever it touches. The kernel is of a very fine flavor, superior to that of the almond, and abounds in a delicious milky juice when fresh; it may be eaten raw, roasted, or pickled. Some also grind it with cocoa in making chocolate, the flavor of which it is said to improve.

CASHMERE. (*See* SHAWL.)

CASSAVA. (*See* TAPIOCA.)

CASSIMERE.—This is commonly called *kerseymere.* It is a twilled woollen cloth, light of texture and more pliable than plain cloth, and especially suitable for vests and light coats. It is either single or double milled, the latter being the stoutest. It is usually woven of the width of thirty-four or thirty-six inches, and is reduced by milling to twenty-seven inches. From their twilled structure, cassimeres are more durable than plain cloth of equal lightness. There are French, English and American cassimeres; French is the best. Cassimere should always be carefully shrunk before cutting.

CAST. (*See* PLASTER.)

CASTOR OIL.—A mild purgative obtained from the nuts of the castor-oil plant by subjecting them to a high pressure. To make it, the fresh seeds are first bruised and then put into a cold press; the oil is then pressed out and allowed to stand some time for the albumen, mucilage, and other matters to settle, after which it is strained off. That of good quality is a thickish fluid of a very pale yellow color, the best being almost limpid, with a slightly nauseous odor and an oily taste. Bad oil is rancid and muddy yellow. Castor oil is a mild cathartic or laxative, operating without much griping or cramps, and generally within a few hours after it is taken. It is considered a suitable laxative in certain inflammatory states of the bowels, and is used to a considerable

extent in dysenteric affections when the passages are bloody and attended with straining. Mixed with turpentine (half a teaspoonful of turpentine to one tablespoonful of the oil) it is very effective in expelling worms. The chief objection to castor oil is its nauseating taste; if, however, it is put into half a cup of strong coffee and drunk off rapidly, it is rendered more endurable. An ounce of castor oil, mixed with fifteen to twenty drops of pure liquor potassæ, an ounce of distilled water, and a drachm of spirit of pimento or of nutmeg, will make an emulsion which is equally effective and not unpleasant to take. The most agreeable way, however, to take castor oil is to place it in the foam of ale or porter, which prevents its adhering to the mouth and throat. The usual dose is about two tablespoonfuls for adults and from a teaspoonful upward for children.

CAT.—There are many varieties of the domestic cat, among the most remarkable of which are the Maltese or Chartreuse cat, of a bluish gray color; the Persian cat, with long white or gray hair; the Angora cat, with very long silky hair, generally of a brownish white color; and the tortoise-shell or Spanish cat, the most beautiful of all. These are all fairly good mousers; but for this purpose none of the pet breeds are equal to the common white, and yellow, and spotted kind. The cat is probably the cleanliest of animals, avoiding to step in any kind of filth, concealing its excrement in the earth with great care, and keeping its fur in very neat condition notwithstanding an invincible repugnance for water. It is very easy to raise, and is extremely prolific, producing from three to six at a litter. If a male is castrated while young (the best time is when he is about six weeks old) he will attain larger size and be more gentle and domestic; it makes him unsociable, however, and intolerant of the presence of any other cat. If cats are allowed to run at large, especially if any open fields or woods are near at hand, they are never subject to disease. Those kept too closely confined frequently have fits, for which a bucket of cold water dashed over them is a good remedy, but which can only be cured by cutting off the end of the tail—an operation which causes only slight pain if skilfully done with a sharp knife or when the cat is in a fit. Although capable of showing considerable fondness for an individual, cats seem to have an affection for places rather than persons, and it is very hard to wean them from any home to which they have grown accustomed. The only way to induce them to remain in a new place is to carry them to it blindfolded, and to keep them shut in for several days until they have grown accustomed to the new surroundings and to seeing the familiar faces around.

CATALEPSY.—A disease in which there is a sudden suspension of volition and of the action of the senses; the limbs and body preserving the different positions given them, and even the face the expression which it had when the paroxysm commenced. The circulation and respiration are in most cases but little affected; but occasionally they are greatly depressed and even imperceptible. This disease bears a great resemblance to the mesmeric state, and is so often feigned that many have doubted and denied its existence. There can be no serious doubt, however, that it is sometimes though not often a real disease. The hysterical and melancholic are most disposed to it, and it occurs most often in young females of a nervous habit; the paroxysm is generally brought on by some strong mental emotion, such as religious excitement, or by some disorder of the digestive or secretive organs. The duration of the attack is variable; sometimes it is over in a few minutes, sometimes it lasts twelve or fourteen hours, and cases are recorded in which it has been prolonged to twenty and even thirty days. During all this time the unvarying motionless attitude and fixed expression give a strange and corpse-like look to the sufferer. In a case of catalepsy a physician must be summoned at once; and the only treatment that can be ventured on in his absence is to loose all the clothes, to immerse the feet in a hot mustard foot-bath, and to make cold applications to the head. In the intervals between the fits, means should be employed to improve the general health and to give tone to the nervous system. As a rule cataleptic patients recover from the attack much sooner when left entirely alone than when subjected to active treatment.

CATAMENIA. (*See* MENSTRUATION.)

CATAPLASM.—A plaster or poultice applied externally to some part of the body. It is used generally either to check inflammation and allay pain, or to promote suppuration and at the same time lessen the pain which accompanies it. For the former purpose it is applied cold; and cotton-wool, steeped in water, and bound to the part with a tight bandage, is a simple and effective application for the purpose. When intended to hasten the progress of inflammation to suppuration, poultices should be as hot as the parts will bear. (*See* POULTICES.)

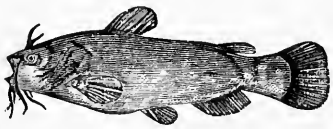
CATARRH. (*See* COLDS AND INFLUENZA.)

CATAWBA WINE.—One of the best and most popular of the native American wines, considered by many to be superior to most of the French and German wines, at least such of them as are to be had in our markets. It is made from the Catawba grapes, which grow abundantly in the valley of the Ohio and in other parts of the country. It is a sweet wine, containing in its pure state from ten to twelve per cent. of alcohol, and is made either into still or sparkling wine; the latter, which is most in demand, contains an addition of alcohol and consequently is stronger. Catawba wine is mostly white, though some red wine is made. It is fit for use two years from the time the grapes are pressed, but reaches perfection, according to Mr. Longworth when about seven years old. The still wine should be drunk at

a temperature about the same as that of the room.

CATERPILLAR.—The common name applied to the larvæ of the lepidopterous insects, such as butterflies, moths, hawk-moths, etc. The varieties of caterpillars are practically innumerable, there being over six hundred in New England alone. Many of them feed on leaves, some species being restricted to a single kind of plant; some feed on flowers, some on seeds, some on roots, and some even on the woody portions of the stems; others on wool, hides, furs, and other animal substances, such as lard and fat. The common caterpillar is very destructive to trees, stripping them of their foliage in an incredibly short time, and unless vigorously dealt with, they will ruin an orchard of fruit-trees in a single season. The surest protection is to plant tansy around the roots, and when this is not practicable, whitewash the trunk from the ground up to the height of six feet. When they build their nests in a tree (their nests are a silky web like that of the spider, but much more compact and closely woven), they must be cut down on a damp day and destroyed; or else burned out by fixing cotton to the end of a long pole and dipping it in pitch. Care must be taken in the latter case not to injure the tree. Boring a hole in apple-trees infested with caterpillars and filling it with sulphur will often drive them away immediately. The caterpillars which infest flowers and garden-plants, can only be kept away by watering the plants frequently and copiously, and by examining them often during the Spring and Summer. Several drugs are recommended for driving them off, but these are nearly always injurious to the plants.

CATFISH.—Found in the markets from February to May, and again in October and November. They weigh from a quarter to



three-quarters of a pound each, and have large flat heads, a smooth slimy brown skin, with no scales on the back, and a whitish belly. The smaller fish are best, and all of them should be skinned before cooking.

Fried Catfish.—Select small fish, skin them, clean, and remove the heads; then sprinkle them with salt and lay them aside in a cool place for an hour or so. Fry them in lard or drippings over a brisk fire, and serve as soon as done. They may also be prepared by dipping them first into eggs beaten to a froth and then rolling them in powdered cracker; fry as before.

Stewed Catfish.—Prepare as for frying, not omitting to let them stand in salt for an hour. Put them into a sauce-pan over a moderate fire, pour in enough cold water to cover them, and stew slowly for half an hour or till they are done. Add one teaspoonful of butter, one of flour mixed to a paste with a little cold water, a minced onion, a little parsley chopped fine, and pepper. Let it boil a minute or so, then dish and serve with the gravy.

CATHARTICS.—A class of medicines that act strongly on the bowels as purgatives. Their number is very large, and they may be divided into several classes: mechanical, including unbolted meal of various kinds, fruits, and mustard seed; oily, as castor and croton oil; saline, as magnesia and its carbonate, sulphate, and citrate, sulphate and phosphate of soda, etc.; acid or bitter, as rhubarb, senna, colocynth, and aloes; resinous, as jalap, gamboge, scammony; and mercurial, as calomel and blue pill. Their action varies greatly, from the mild and almost natural effect of magnesia and aloes, to the violent purging of jalap and gamboge. Cathartics are very commonly used in domestic medicine, and probably no class of drugs is so frequently abused; a resort to them being so easy as to lead in many instances to the neglect of highly important hygienic rules. A due attention to diet, exercise, and bathing would be a far more effective remedy than any cathartics for a majority of the difficulties for which the latter are used. In many cases, however, their use is necessary, and directions for them are given under the various diseases. Castor oil, epsom salts, magnesia, aloes, rhubarb, and senna, are the only cathartics that should be used without medical advice; the most violent ones may produce serious results. No cathartics, however, either should or can be relied upon to cure constipation, to "work off a cold," or to relieve dyspepsia; in all such cases a cure can be looked for only in a due observance of hygienic laws.

CATNIP or CATMINT, a plant which grows wild in the fields throughout the United States, the leaves of which are much employed as a domestic remedy. The leaves, which are the only part of the plant used, are aromatic, and pungent and somewhat bitter to the taste. Cats are very fond of them, and are said to use them medicinally. *Catnip tea*, the form in which catnip is administered, is an infusion made by pouring hot water on the leaves and allowing them to steep. It acts as a tonic and excitant, and possibly is an antispasmodic; in a much diluted form, with a little sugar in it, it is often given to very young infants to soothe them and to expel the wind from their stomachs. Chewing the leaves is said to be good for the toothache. The leaves may be preserved by drying them in the sun and keeping them in a dry place. They are best when the plant is in bloom.

CATSUP.—The catsups sold in stores are generally poor stuff, made of dubious ingredients, and the fruitful source of indigestion and other disorders of the stomach. At their best they seldom equal the home made; and it is so easily made that every family should provide its own supplies. In making catsup *never use a copper or brass kettle.*

Mushroom Catsup.—*Take:*—Mushrooms, salt, pepper and allspice.

Select mushrooms full grown, and with large flaps; put a layer of these at the bottom of a pan, and sprinkle them with salt: then another layer of mushrooms and salt; and so on alternating the layers till the desired quantity is prepared: let them stand two or three hours; then pound them in a mortar, or mash them with the hands, and let them remain two days (no longer), stirring them up and pressing them well each day. Now pour them into a stone jar, and for each quart add an ounce and a half of whole black pepper, and half an ounce of allspice; cover the jar closely, set in a pan of boiling water, and boil it for two hours. Strain the juice off without pressing the mushrooms, into a clean stew-pan, and boil it very gently for half an hour. Skim it well, pour it into a clean jar, and let it stand till cold; then strain it through a flannel bag, bottle it, seal up tight, and keep in a cool place. Examine it from time to time by putting a strong light behind the neck of the bottle, and if any scum appears about it, boil it up again with a few peppercorns.

Tomato Catsup.—*Take:*—Tomatoes, 1 gal.; salt, 4 tablespoonfuls; black pepper, 4 tablespoonfuls; mustard, 3 tablespoonfuls; allspice, 1 tablespoonful; cloves, 1 tablespoonful; cayenne pepper, 1 teaspoonful; vinegar or white wine, 1 pt.

Take one gallon of nice ripe tomatoes, cut them in half, sprinkle four even tablespoonfuls of salt over them and put them in the preserving kettle with one pint of good vinegar; let them simmer slowly for three hours, stirring often; then strain to avoid the skin and seeds; add four tablespoonfuls of ground black pepper, three of mustard, one of allspice, one of cloves, one teaspoonful of cayenne pepper, or two or three pods of red pepper; boil until reduced to two quarts, then bottle and seal.

Walnut Catsup.—*Take:*—Young walnuts, 10 dozen; vinegar, 2½ pts; salt, ¾ lb; whole black pepper, 1½ oz; nutmegs, ½ oz; 40 cloves; ginger, ½ oz; mace, ¼ oz.

Bruise ten dozen young and tender walnuts, add to them three quarters of a pound of salt and a quart of good vinegar; let them stand two weeks, stirring them every day: then strain them through a cloth and squeeze them, and set the juice aside; add to the husks half a pint of vinegar, and let it stand over night: then strain and squeeze as before, and add the liquor thus obtained to that set aside the day before. Add one ounce and a quarter of whole black pepper, half an ounce of nutmegs bruised or sliced, 40 cloves, half an ounce of ginger, and a quarter of an ounce of mace; boil it half an hour, then strain and bottle it for use.

CAUDLE.—This is a preparation very useful in the sick-room.

Ale Caudle.—To a quart of thick rice or water-gruel add a pint of ale and enough of allspice to flavor, and of sugar to sweeten it. Boil for five minutes, stirring constantly: then strain it, and put in a cool place till wanted. This is very nourishing and palatable.

Flour Caudle.—Put into a pudding basin a pound of flour, cover the basin over, and set it in a kettle of boiling water; keep it boiling two hours: the flour will then be converted into a hard ball with a brown crust, which must be removed: then grate the flour, and set away in a jar for use. To make into a caudle, rub a dessertspoonful of it into five tablespoonfuls of cold water; set over the fire five tablespoonfuls of new milk and two teaspoonfuls of sugar, and just when it boils add the flour and water. Stir the whole over a slow fire for twenty minutes: it is then ready for use. This caudle is good for young children whose bowels are too loose.

Rice Caudle.—Mix one tablespoonful of ground rice in half a teacupful of cold water, and pour it into a quart of boiling water. Let it boil till it thickens, stirring all the time: when it begins to thicken, add a wineglass of brandy, sweeten to taste, and flavor with grated nutmeg and lemon peel. Boil it a little longer until perfectly smooth, and then strain it. This is a strong and highly nutritious food.

CAULIFLOWER.—A plant of the cabbage tribe, differing from broccoli only in being whiter and less hardy. It has a compact, rounded head of very delicate flavor, standing on a stock eighteen inches to two feet in height, surrounded by long leaves. Two crops of the cauliflower may be raised in one season. For the early crop, seed should be sown in September in good rich soil, and in about four weeks transplanted to a cold frame, set two or three inches apart, and carefully protected by glass during the winter. In February, set them in another frame, eight to twelve inches apart, to prevent a spindling growth; and transplant to the garden as early in spring as possible. Set them three feet from each other, and water them well and hoe them during dry weather. In transplanting lift a ball of earth with the roots to secure continuous growth. For the second crop, sow the seed in an open bed in May, and transplant to the garden in July. Those plants which do not head before frost may be removed to a dry cellar or shed, covered with litter, and allowed to head during early winter.

Boiled Cauliflower.—White cauliflowers are the best. Take off the outside leaves, cut the stalk off close to the head, and let them lie in salt and water for half an hour before cooking. Boil them fifteen or twenty minutes, according to size, adding a little salt to the water. Dish carefully to avoid breaking the leaves, and serve at once with drawn butter.

Pickled Cauliflower.—Separate the stems, wash them carefully and sprinkle with salt, using half a pint for a peck. In twelve hours shake off the salt, lay the pieces in jars and pour over them boiling vinegar, which has boiled for five minutes, with these ingredients:—To one gallon of vinegar add half a pint of sugar, twelve blades of mace, twenty four white pep-

percorns; of mustard and celery seed, a tablespoonful each, and some bits of red pepper pods. The jars or cans must be closed at once.

Scalloped Cauliflower.—Boil as above, and pack them, stems downward, in a buttered pudding dish. Make a sauce with a cupful of bread-crumbs beaten to a froth with two tablespoonfuls of melted butter and three of cream or milk, one well-beaten egg, and pepper and salt to taste. Pour this over the cauliflower, cover the dish tightly, and bake six minutes in a quick oven, browning them nicely. Serve hot in the dish they were cooked in.

Stewed Cauliflower.—Common heads will do for this. Boil them till about half done; drain them, place them in a stew-pan stems downwards, and set on a slow fire with a spoonful of fat. Stir gently so as not to break them, and in about five minutes add half a gill of broth (or half a teacupful of milk thickened with a tablespoonful of flour or rice), and season with salt or pepper; simmer till done, stirring now and then, dish them, turn the sauce over them, and serve hot.

CAVIARE.—A kind of food made of the roes of large fish such as the sturgeon, cod, and salmon. It is made chiefly in Russia, whence it is exported to this country in kegs. It makes an excellent breakfast dish, served between slices of toast; and is also good on bread with a drop or two of oil and vinegar. The caviare which is made up in thin cakes is of an inferior quality.

CAYENNE.—A pepper made of the several varieties of the capsicum plant, which grows in the East and West Indies, in South America, and to some extent in this country. It is the most powerful of the spices, has an acrid taste, produces a fiery sensation in the mouth if taken in any but the smallest quantities, and is said to promote the digestion of many kinds of food and especially of fish. It does not leave the irritating and weakening effect upon the stomach which black pepper produces if constantly used. The cayenne of commerce is in the form of a powder, and it is subject to gross adulterations. Red lead and vermilion are sometimes added to it to preserve its color which fades with age, and cases of poisoning have been traced to this cause; ground rice, salt, and turmeric, are more harmless additions,—salt is nearly always added to increase the weight and prevent the powder from rising into the air too readily in the form of dust. Guinea cayenne is the hottest and strongest, but that which comes from the West Indies is best. Cayenne pepper makes an excellent gargle (a teaspoonful steeped in a pint of water) in scarlet fever; and it is also said to relieve the nausea of sea-sickness. Great care must be taken in handling not to let it get into the eyes, as it is not only very painful but dangerous.

CELERY.—An umbelliferous plant which in its wild state is said to be poisonous, but which when brought under cultivation becomes an agreeable and wholesome vegetable. It requires a deep, rich, mellow soil. Some of the best celery is obtained from swamp land, and it is a semi-aquatic plant. Plant the seed in a well-prepared bed from the end of March to the beginning of May; when the plants are two or three inches high, transplant them to another bed similarly prepared. Let them grow here until they are from six to ten inches high, and then transfer them to the final bed; plant in rows three feet apart, and at regular intervals, in the row, of eight inches. As they advance in size and become a foot or so in height the earth must be heaped up about them frequently, and nearly to the leaves. This latter process is called "blanching." The surface soil must not be too moist, but a wet subsoil is not so injurious as to most other plants. The season for celery begins about the middle of August, but it is always slightly bitter till frost has touched it; it is found in the markets till about the first of April. In choosing for salad, select the solid, close, clean, and white stalks, with a large, close heart. For soups, inferior stalks, the leaves, and even the seeds, answer every purpose. Before sending to the table cut off the roots and scrape the stalks, rejecting any that are green and tough; let the white, tender leaves nearest the heart remain. Keep it in cold water until it is sent to the table.

Salad.—Clean the celery, and wipe it dry; split the stalks and cut into pieces about an inch long, put into a salad dish with salt, vinegar and a little mustard; stir and let it stand an hour, then add pepper and oil, stir again, and serve. Or use Mayonnaise sauce.

Sauce (for Poultry).—Cut up four or five celery heads into small pieces, and boil them in half a pint of water till tender; mix two teaspoonfuls of flour with half a teacupful of milk and add it to the celery, with half a teaspoonful of salt, and a teaspoonful of butter; boil it once and serve.

CEMENTS.—It would require several pages merely to enumerate the different kinds of cement, and the different purposes to which they are applied; but we shall only include here such of those as will prove most useful in the household.

Alabaster Cement.—*Take:*—Beeswax, 1 lb; rosin, 1 lb; alabaster (powdered), ¾ lb.

This is for mending broken alabaster ornaments, and is extremely strong. Take a pound of white beeswax and one of rosin, melt them, and add three quarters of a pound of finely powdered alabaster. Stir the whole well together; then knead the mass in warm water in order to incorporate the alabaster with the other ingredients. The alabaster to be mended must be perfectly dry and heated; the cement must also be heated. Cover the fractured parts with the cement, join them together, bind them tightly, and let them remain undisturbed for a week.

Bottle Cement.—*Take:*—Sealing-wax, ¼ lb; rosin, ¼ lb; beeswax, 2 oz.

This is for sealing the corks of bottles. Melt together a quarter of a pound of sealing

wax, a quarter of a pound of rosin, and a couple of ounces of beeswax; when it froths stir it with a tallow candle. As soon as it is melted, dip the mouths of the corked bottles into it, and set them away to cool. This is an excellent cement for excluding air from all such things as are injured by exposure.

Cheese Cement.—*Take:*–Cheese; quicklime; white of egg.

This is very durable for mending coarse china or earthen-ware. Take some fresh cheese, pound it, and wash it through warm water till all the soluble matter is extracted; then strain dry and it will crumble. By drying it upon blotting paper, it may be kept a long time. For use, mix the cheese with quicklime (in the proportions of one ounce of cheese to half an ounce of quicklime), and add enough white of egg to make it into a paste. When ready it must be applied immediately, as it dries quickly, and cannot be melted a second time.

China Cement.—*Take:*–Gum-arabic; plaster of Paris.

A very white cement for mending fine china. Take a very thick solution of gum-arabic in water, and stir into it plaster of Paris till it is of the consistency of thick paste. Apply it with a brush to the fractured edges of the china, stick them together, and bind them. In three days the article cannot be broken in the same place.

Diamond Cement.—*Take:*–Isinglass; proof spirit; resin, or gum ammoniac; alcohol.

This is very good for mending broken glass. It is made by steeping isinglass in water till it swells, and then dissolving it in proof spirit, to which must be added a little gum resin or gum, ammoniac dissolved in the smallest possible quantity of alcohol. It should be heated before it is applied. It will only partially resist moisture.

Iron-ware Cement.—*Take:*–Iron file dust; quicklime; whites of eggs.

Beat the whites of eggs to a froth; then stir into them enough finely powdered quicklime to make a thin paste; then add enough iron file dust to make a thick paste. Fill the cracks in iron-ware with this cement, and let it remain several weeks before using.

Japanese Cement.—Mix rice flour with cold water to a smooth paste, and boil it gently for twenty minutes. It answers all the purposes of wheat flour paste, while it is much superior both in transparency and in smoothness.

Wax Cement.—*Take:*–Yellow wax; turpentine; Venetian red.

Melt yellow wax, mix with its weight of turpentine, and add a little Venitian red to color it. This, when cold, is as hard as soap, but it can be softened by the warmth of the hand. It is useful to stop up cracks; and is better than the hard cement for covering the corks of bottles that are not going to be kept very long.

CENTURY PLANT. (*See* AGAVE.)

CESSPOOL. (*See* DRAINAGE.)

CHABLIS.—A sweetish white wine, similar to Burgundy, which is raised near the town of Chablis, in the south of France. It is very fine, and much esteemed by epicures as an accompaniment to oysters. The best brands are *Bouguereau*, *Mont du Millieu*, *Valmur*, *and Vaudesir*. It should be drunk at a temperature a little lower than that of the room.

CHALK.—Mineral substance, consisting principally of carbonate of lime derived from the shells of myriads of minute marine animals. It is of friable texture, and easily rubbed to a powder. In a powdered state it is sold as the *prepared chalk*, so useful for polishing brass, tin, and glass. *French chalk* is a pure variety of steatite or talc, used by tailors for marking their cloth: it is also mixed with cosmetics to give them body. *Whiting* or *Spanish white*, is chalk finely ground and purified by washing and separating the hard particles. It is highly useful for cleaning the finer metals.

Camphorated Chalk. (*See* TOOTH POWDERS.)

CHAMOIS-SKIN.—The skin of the chamois, a species of goat or antelope which runs wild in the fastnesses of the Swiss Alps. The skin, when properly tanned, is extremely soft and pliable, more so than even that of the kid, and can be put to many uses in the household. It is unequalled for polishing smooth and highly finished surfaces, such as jewellery, silver-ware, glass, pianos, and other furniture. It is also excellent for packing away choice articles of jewellery or table-ware, as it is comparatively impervious to dampness. In selecting, choose that which is pliable and free from lumpy spots. If it is once wetted it becomes harsh and can afterwards be used only for the coarser kinds of cleaning; when used as a duster it should be carefully shaken out each time or it will hold the coarser grains of dust and scratch the furniture.

CHAMOMILE. (*See* CAMOMILE.)

CHAMPAGNE.—The most celebrated of the French wines, chiefly produced in the province of that name. It is generally understood in this country to be a brisk, effervescing, sparkling white wine of a peculiar flavor; but this is only one of several varieties. There are both red and white champagnes, and both of them may be either sparkling or still: the sparkling wines are called *mousseux*, and the still *non-mousseux*. The sparkling are most highly esteemed, on account of their delicate flavor, and the agreeable pungency which is given them by the carbonic acid they contain. There is a great difference in the quality of champagne wines, according to the particular vineyards at which they have been made. The finest are produced in the sloping grounds on the north bank of the river Marne; and they are mostly white wines. Dry champagnes (*i.e.*, not sweet) are growing in favor, especially among those with whom sugar disagrees. There is no wine, with the possible exception of sherry, that is more extensively adulterated and imitated by artificial combinations than sparkling

champagne. The sparkling of champagne is properly caused by the fermentation of rock candy introduced into still wine. Inferior wines have carbonic acid pumped in; in either case the sparkle cannot be depended upon for more than two years. The red champagnes are not used much in this country; they seldom equal Burgundy which they much resemble. That of *Clos de St. Thierry* is considered the best.

In selecting champagne, many consider the briskness and effervescence as a test of their excellence; but a good judge will prefer a liquor of moderate briskness, as much of the aroma evaporates with the froth. Champagne must be kept in an equable temperature, and cooled by ice, outside of the bottle, never in the wine. It intoxicates quickly and the excitement it produces is of a more vivacious and agreeable character than that which comes from any other wine, but its duration is shorter, and the reaction less. For this reason it is an admirable tonic for invalids and for all who are suffering from a low state of the system. The best brands are: Pomery and Greno, Roederer, Mumm, Duc de Montebello, Krug, Giesler, and Heidsick. Veuve Clicquot is highly prized as one of the best of the sweet wines.

Champagne Frappee.—This is made by freezing the champagne in salt and ice until it has the consistence of snow. When served in this way it is very delicate and refreshing.

CHAPPED HANDS.—An excellent application for chapped hands or lips may be made as follows: First dissolve one drachm of borax in one ounce of rose-water, and add it to half an ounce of glycerine; melt one drachm of spermaceti in the same quantity of olive oil, and ten drachms of pure lard; add the solution to that, little by little, stirring all the time, and continue to stir until it is nearly cold. Warm it slightly before applying; it will restore the skin to its softness and smoothness without parching it as pure glycerine does. A simple remedy is this: Take common starch, and grind it with a knife until it is reduced to the smoothest powder, put it in a clean tin box, so as to have it continually at hand for use. Then, every time that the hands are taken from the suds or dish-water, rinse them thoroughly in clear water wipe them, and while they are yet damp rub a pinch of the starch thoroughly over them, covering the whole surface. If care is taken to wipe the hands perfectly dry after washing, chapping is not likely to occur.

CHARCOAL.—That part of wood which remains after the other elements, oxygen and hydrogen, have been extracted by partial combustion. Next to the diamond, charcoal is the purest form of carbon known to us. As it ignites very readily it is very useful in starting fires of other fuel, and as it gives out no smoke or flame in burning it can be used under circumstances where no other fuel would be endurable. It is also useful in the kitchen when a sudden accession of heat is required, or when a steady fire is wanted for a limited time. In this country, however, charcoal is not much used for domestic purposes; it is more expensive than wood or coal, it requires constant attention, and its use, especially in close rooms, is highly dangerous. In burning, it throws off large quantities of carbonic acid gas; and, as this gas is invisible and odorless, suffocation from it is peculiarly liable to ensue. Many fatal accidents have resulted from burning charcoal in close rooms, or in stoves where draughts are imperfect. The first sensation when it has become dangerous is a slight sense of weakness; the limbs feel powerless and the head heavy. A slight giddiness, accompanied by a distinct feeling of flush or glow on the face and neck, succeeds. Soon after, the person becomes drowsy, wishes to sit down, but commonly falls insensible to the floor, snoring heavily as in apoplexy. When any of these symptoms are felt, the person should at once seek the open air. The proper treatment for a person suffocated by charcoal, is to remove him immediately to the open air; then drop cold water over his head and chest, and if breathing has ceased, imitate respiration by breathing strongly into his mouth and expelling the air by pressing gently on his chest. When he has recovered sufficiently to swallow, administer hot coffee, or brandy and water. A strong stimulus, such as hartshorn, applied to the feet is also very good.

CHARLOTTE De RUSSE.—(*Chocolate*). *Take*:—Cream 1 pt; powdered sugar, ½ teacupful; chocolate (grated), 3 tablespoonfuls; gelatine, ½ oz.; eggs 4; vanilla, 1 teaspoonful; sponge cake.

Heat a pint of cream slowly to the boiling point; add half a cupful of powdered sugar, three tablespoonfuls of grated chocolate stirred into a little milk, and half an ounce of gelatine, soaked in 2 tablespoonfuls of cold water: when these are dissolved, add the mixture by spoonfuls to the beaten yolks of four eggs. Set the whole into a sauce-pan of boiling water, and stir until it becomes very hot, but do not let it boil; then remove, flavor with a teaspoonful of vanilla, and whip it to a high froth, adding at the last the beaten whites of the four eggs. Line a mould with sponge cake, fill with the mixture, and set upon the ice until ready to be served.

II. Whip stiff one and a half pints of cream and put it aside until it is set; now run off the thin cream that has settled to the bottom of the vessel; add to it half an ounce of gelatin which has been steeped in cold water for two hours, five ounces of sugar, and a half inch of vanilla bean. Set it on a slow fire until it is thoroughly dissolved; then remove the vanilla bean, and whip into the mixture two raw yolks of eggs; when it is about to set, gently incorporate it with the whipped cream. Pour it into a mould carefully lined with lady-fingers or thin pieces of sponge-cake, and set it in a cold place to become firm, when it will be ready for use.

CHECK (BANK.)—A check is a written order addressed to a banker, by a person having money on deposit with him, directing him to pay on presentment to a person named therein, or to his order, or to bearer, a certain sum of money.

The following is the form of a check payable to bearer:

No. 26. NEW YORK, May 1, 1876.

National Park Bank,

Pay to John Doe, or bearer,

One hundred and seventy-one 50-100 dollars.

$171.50. RICHARD ROE.

If the foregoing were written "to John Doe or order" (instead of bearer), no person could get the money but the one to whose order the check is drawn, unless the check is endorsed. See *Endorsement* under PROMISSORY NOTES.

In filling out checks it is advisable to begin to write the amount as near the left hand margin of the blank as possible, so as not to leave room for inserting a larger sum. While it is a general rule that negotiable paper is vitiated by an alteration, even when it comes into the hands of an innocent third party, it has recently been decided that the maker is liable on an altered note, bill, or check to a *bona fide* holder, who takes it in the usual course of his business, before maturity, if he issues it in such a condition that it may be easily altered without detection.

Checks closely resemble bills of exchange, but differ in the following particulars: They are always drawn on a bank or banker; they are payable immediately on presentment, and are not allowed days of grace; they are not presented for acceptance merely, although they sometimes are for certification; the drawer is not discharged by delay in presentment, unless he is prejudiced thereby, as by the intermediate failure of the banker.

Checks are governed by the same rules with regard to negotiability, transfer, endorsement, presentment, and notice of non-payment as promissory notes, which see.

A certified check is one which is marked as "good" on its face by the cashier, or other proper officer of the bank on which it is drawn. The bank thereby becomes liable as acceptor, and is bound to pay the check when presented by an innocent holder for value (*i. e.* one who has honestly given value for it), whether it has funds of the drawer on deposit or not.

As before stated, the drawer of a check is not discharged by delay in presentment, unless he is prejudiced thereby. But in order to charge the endorser the holder of a check must exercise due diligence in presenting it for payment. When the parties reside in the same town it should be presented by the close of business hours on the next secular day after its receipt. When the parties do not reside in the same town, and presentment is to be made through the post office, the holder has until post time of such next secular day.

CHECKERBERRY.—A little red berry, much like a miniature crab-apple, which is found growing upon a shrub from four to six inches high, on low sandy soils, usually among pines. It is very nice to eat raw as taken from the bush, and it is also used in syrups and confectionery. Checkerberries are sometimes put in whiskey or spirits, making "tea-berry rum." They are found in the markets in the winter and spring months. The leaves of the checkerberry bush make the essence of wintergreen. *See* WINTERGREEN

CHEESE.—Cheese is obtained exclusively from the milk of animals, and its quality varies with the class, breed, and food of the animal, and the process of manufacture. The most ordinary source of cheese is the milk of the cow, and there are certain varieties of cows which produce much cheese and little butter, as there are others which produce much butter and little cheese. The kind of food given to the cows is very important, for just in proportion to the richness of the milk in casein and cream is the richness of the cheese. The value of cheese as an article of diet has not been entirely established. If we consider its chemical composition it is one of the richest of foods in nutritive elements; but Dr. Smith has found that the popular belief that it is not easily digested is true. This objection, however, applies only to the new and poor cheese; those that are old and rich, not only digest easily but promote the digestion of other food. That which is old and dry (but not decayed) may be given to children to relieve constipation.

To Make.—Some of the best of foreign cheeses are made of skimmed milk, but in domestic manufacture it is impossible to produce good cheese unless the milk is put in whole. The utensils required for making cheese are the *cheese tub*, in which the milk is coagulated and the curd pressed; a large brass kettle for heating it in; the *cheese press*, a power obtained by lever, screw, or weight; the *cheese cloth*, a piece of thin open linen; a *cheese tray* or *ladder;* and *cheese boards*, circular pieces of wood on which the cheeses are put in the cheese room. These should all be washed thoroughly, scalded, and dried in the air each time they are used.

The substance used for coagulating the milk is *rennet*, from the stomach of a calf. It can be bought already cured, and is prepared for use by soaking it in a quart of water for several days with a bit of lemon-peel and two or three cloves; after it has soaked long enough, hang the rennet up to dry, and bottle the water for use. The quantity of rennet to be used will depend altogether on its strength, and as this varies it is impossible to give any precise directions as to it. If the rennet be good, however, half a teacupful ought to curdle ten gallons of milk in from an hour to an hour and a half.

When all is ready, strain the milk into the tub; then heat a portion of it in the kettle (be careful not to smoke it) and add it to the cold till the whole is raised to 95° to 98° Fahren-

heit. Then stir in the rennet, and if the curd has not formed in an hour, add a little more. When the curd has become firm take a long knife and cut it into small checks to the bottom of the tub; great care must be taken, or part of the curd will run off into the whey and the cheese be injured. When the whey is of a greenish color the curd has been well formed. After the curd has sunk to the bottom, dip out some of the whey, and cut the curd up into still smaller pieces; then let it stand for a half or three quarters of an hour to settle thoroughly. It is now time to separate the curd from the whey. Tilt up the tub slightly; collect the curd at the upper side; place upon it a semicircular board fitting the tub loosely; on this board place a heavy weight, and as the whey drains to the lower side of the tub ladle it out. This operation of putting the curd under the weighted board must be repeated several times; then cut it up again into small pieces, turn the mass upside down, and press again until every particle of the whey has been extracted. Close attention is required in this part of the operation. The whey being all pressed out, the curd must now be scalded. Cut or break it into extremely small pieces, put it into the linen cloth, immerse it in the brass kettle containing warm water enough to cover it, and raise the temperature to 105°, and let it remain half an hour or till heated through; then add cold water gradually till the temperature is reduced to about 90°. Then drain the curd thoroughly as before, and salt it, allowing four ounces of fine salt for every ten pounds of curd, and mixing it in thoroughly. Put it into the linen cloth, place it in the cheese hoops, spreading the cloth out smoothly, and then set it into the cheese-press and let it remain two days. When taken from the press grease it all over with common butter or butter made of whey-cream and set it away to ripen. It should be turned and greased every day till firm, and afterwards should be turned and greased at least once a week for six months.

Good cheese does not require to be colored; but, if it is desired, dip a piece of arnotto (or anatto) into a bowl of milk and rub it around the side till the milk assumes a deep red color. Add this to the milk of which cheese is to be made in sufficient quantity to impart a bright orange color to the latter. This in no way affects the taste or smell of the cheese, but only makes it a rich orange yellow which deepens with age. Arnotto is adulterated with red lead, however, which is poisonous, and it should therefore be used carefully. *Sage cheese* is made by putting in sage juice along with the rennet.

The cheese-room in which cheese is put to ripen may be a loft, and should be airy and dry. It should be kept of an equable temperature: too much warmth will make the cheese sweat and lose its oily parts, and too much air, or the rays of the sun, will dry it too fast and make it crack; a moderate ventilation with a temperature of about 65° to 70° is best. Cheese is liable to a kind of blistering, called heaving; it is caused by a slight fermentation and the formation of air in the interior. The air may be released by pricking the cheese deep in the blistered places, and removing it for a time to a cooler situation.

Cheese should be kept in a dry cool place; and after it is cut, it should be wrapped in a linen cloth and put in a tight tin box till again required for use.

Cottage Cheese.—This is not cheese properly speaking, but it is a very pleasant preparation of milk. Turn the milk by adding a little rennet or setting in a warm (but not hot) place. When the curd has formed, put it into a bag of coarse linen, and hang it up to dry till not another drop of whey can be squeezed out of it. Then crumble it up fine, salt it to taste, and thin it to the consistency of paste with sweet cream. Cottage cheese is very nice eaten with sugar or preserves; it is best when fresh.

Cream Cheese.—Take sour cream, salt it to taste, and hang it up in a linen bag to drain until dry; this will take two or three days. Then put it in a deep dish, still in the bag, and let it stay two weeks to ripen, sprinkling salt over it every day. If wanted to ripen quickly, cover it with mint or nettle leaves. Cream cheese is more digestible than ordinary cheese both because it is softer and more readily masticated, and has a smaller proportion of casein.

The best cheese is not colored, but many cheeses are colored by saffron, marigold leaves, sage grass, and, as already explained, by annatto.

Cows not exceeding 4 years old yield the best milk for cheese. The proportion of cheese obtained from milk varies according to the quality of the milk, the weather and season. In summer a gallon often makes a pound of cheese, while at other times 3 may be required.

Milk often tastes of the food on which the cows are fed. The milk of turnip-fed cows has a disagreeable flavor which can be eradicated by a small quantity of saltpetre added to the milk while warm from the cow.

Cheese is frequently infested by maggots. To prevent these, rub, brush and keep the cheese dry, well aired and each kind by itself. In Holland, where hydrochloric acid is used instead of rennet, the cheeses are reported never to have worms. But Holland cheeses are rather hard because of the use of this acid.

Wine added to curd rapidly ripens cheese.

If cheese aids digestion, it is the kind in which the process of decay has begun, which by inducing decomposition in the food already taken, acts as sour leaven does when incorporated with dough.

Cheese is made from the milk of goats, sheep, and asses, as well as cows. The Tartars get their cheese from mares' milk, the Bedouins of the desert from camels'. In tropical climates buffalo's milk is used, and the Laplander makes a delicious cheese from reindeer's milk. The

Chinese have made cheese from peas and beans. In parts of Germany potatoes are boiled, mashed and mixed with the curd. In Arabia and the East a most unpalatable cheese is made by drying butter-milk curds into cheese, which is powdered for use.

Cheese-making is more than 4000 years old. In the book of Job (chap. x. 10) is found, "Hast thou not poured me out as milk and curdled me like cheese."

Homer (900 B. C.) in the Odyssey, makes Ulysses, in the cave of the Cyclops, admire "the bending shelves with loads of cheeses prest."

Euripides, (407 B. C.) Theocritus, and the early poets, frequently allude to it. It was a common species of food in ancient Rome.

Varieties in Market.

The following cheeses can generally be found in the New York stores. It is best to take the advice of a reliable dealer, regarding the quantity of any cheese that it is wise to lay in at a time.

Strong, in this list, means of a high flavor and odor, but not necessarily sharp. Most new cheeses are relatively mild, and develope their characteristics, especially sharpness, with age.

American Cheeses—*Pine Apple*,—*English Dairy* (imitations of), *Factory*, and the home-made Cottage cheese, like the Schmeer Käse of the Germans.

None of the American cheeses are classed among strong cheeses. They are good all the year around, but the Cottage is best in summer.

English Cheeses (Of variable strength, sometimes sharp).— *Stilton* comes first in fame and price. It is so named from the place where it was first sold. The cheeses are mostly manufactured in Leicestershire. It takes two years to properly mature the cheese for use; then it becomes decayed, blue, and moist. It is a common trick to hasten its maturity by putting each separate cheese in a bucket and covering it with horse dung. This rapidly gives the required appearance of maturity.

In a district of Ross-shire they ripen their cheeses to make them like Stilton, by burying them below high-water mark.

Cottenham.—A strong kind of Stilton.

Cheddar (Mild). — Made from new milk, retaining its natural cream.

English Dairy (Medium).

Dutch Cheese. — *Dutchman's Head* or Edam (Medium). — Not equal to the best cheeses of England, being hard.

French Cheeses are generally for winter consumption, and come to us only from October to May.

Brie Cheeses (Mild).—Are made from cream.

Camembert (Strong).—A little like the Swiss.

Mont d'Or (Mild).—From central France. Made from goats' milk.

Pont de Salu (Very strong).

Pont d'Evèque (Mild).—A very pleasant cheese. More flavor than Brie.

Roquefort (Medium and sharp).—Made from the milk of goats and sheep, and ripened with great care in caverns

Solferino (Strong).

German Cheeses.—*Limburger* (very strong).—Not considered ready for consumption until partly putrified.

Schabzieger or *Sap Sago*—Which gets its green color from melitot leaves.

Italian Cheeses.—*Livarno* (Strong). *Parmesan* (Medium—slightly sharp).—From the most fertile Milanese territory, it is so full of oil that it has been erroneously supposed that oil was added to the curd. It was formerly supposed to be made from goat's milk, but it is made merely of skimmed cow's milk manipulated in a peculiar way. The best Parmesan is kept three or four years, and none is sent to market until it is at least six months old.

Scotch Cheese.—(*Dunlop.*)—Which gets its flavor from lovage leaves, is the only one known here.

Swiss Cheeses.—*Gruyere* is the best of the Swiss cheeses, many of which are celebrated. It is made in the canton of Fribourg. Its peculiar flavor is said to be owing to the herbage of the mountain pastures on which the cows feed.

Neufchatel (Variable).—Is sold in small rolls, covered with tin-foil; it is simply a cream cheese such as is described above.

CHERRY.—This is one of the most delicious of the summer fruits. Among the many varieties which appear in the markets the Ox-hearts and White-hearts are the best; but besides these are the Black-hearts, May-dukes, Dikemans, Black-mazzards, Black-eagle, Honey, and Kentish or common sour cherries. They ripen at the South as early as the middle of May, and thence find their way to northern markets; and from this time till August they are abundant in favorable seasons. Cherries make an excellent and refreshing dessert, and their flavor is much improved by putting them on ice an hour or two before serving them. The Kentish or common sour cherries are much used for pies, tarts, puddings, and the like. Wild cherries are a little purplish-black berry growing in long bunches and looking more like currants than the cultivated varieties. They have a sweetish, pungent, and slightly insipid taste; and are considered wholesome as long as the seeds are not swallowed or cracked in the mouth. Cultivation has improved the wild cherry much, both in taste and size, and no doubt more could be done in this direction.

Bounce (Cherry).—Take ten pounds of cherries—half of sour and half of sweet—and beat them to a pulp in a deep wooden tub; then put them into an earthen-ware jar, stir in three pounds of white sugar, and add five quarts of good whiskey. Stir together thoroughly and decant it into a demijohn, where it can be

corked up tightly. Shake every day for four weeks; then let it stand four weeks without shaking. Then strain and bottle for use. Cherry bounce improves as it grows older.

Brandy (Cherry).—This is made by simply dropping ripe wild cherries into good brandy, corking it up tightly and leaving them to soak for at least two months. It is pleasant, but highly intoxicating, and should not be drunk often nor in large quantities.

CHESTNUT.—The chestnut is the most farinaceous and least oily of all the nuts and is consequently very easy of digestion. The American variety grows very abundant in the Middle States, Virginia, the Carolinas, and the upper part of Georgia. It ripens with the first frost and continues in season throughout the winter. The European or Spanish chestnut is a much larger variety, but is not so sweet nor so daintily flavored. In Italy, Spain and the south of France they are a staple article of food and are prepared in a variety of ways. A well-known English writer on food says: "Chestnuts stewed with cream make a much admired dish, and many families prefer them to all other stuffings for turkeys: they make an excellent soup, and I have no doubt that chestnuts might be advantageously used in cooking so as to make many agreeable and wholesome dishes. I have had them stewed and brought to the table with salt fish, when they have been much admired; but it is exceedingly difficult to introduce any article of food that has not been sanctioned by long custom." In boiling them, add enough salt to give the water a strong flavor. In roasting cut a slice in the rind before putting them in the fire. In keeping them, occasionally pick out the wormy ones.

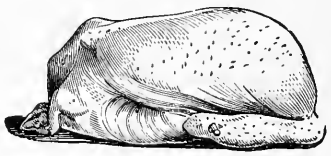
CHEST-PROTECTOR.—A pad of flannel, or other suitable material, to be suspended over the chest. Of special use when gentlemen change temporarily in cold weather from high vest and scarf to low vest and neck-tie. Its use in such changes can not be too strongly urged.

CHICKEN (For instructions as to raising *see* POULTRY. Also *see* BIRDS).—The term "chicken" is commonly applied by poulterers to all fowls under a year old; but properly speaking it includes only the female fowls under four months old and the males that are less than three months. From four months to twelve months the females are *pullets* and after that *hens;* the males are *cocks* after the age of seven or eight months, and are only fit for soup or boiling when more than a year old. When very young the males and females are equally delicate and tender. (*See* CAPON.) In the opinion of physicians the flesh of the chicken at three months old is the most delicate and easy to digest of all animal food; hence it is peculiarly adapted for the stomach of invalids or the constitutionally weak.

The best mode of killing chickens is by wringing the neck, but if this is not done skilfully so as to break the spinal cord at the start it causes much suffering. The practice of killing them by sticking a knife through the upper jaw into the brain and picking them while they bleed slowly to death is inexcusably cruel.

In selecting chickens (for purposes of convenience we shall include all we have to say about fowls under this head) choose those in which the eyes are full and bright, and the feet moist, soft, and limber. When stale the eyes will be dry and sunken, and the feet and legs dry and stiff; if very stale the body or some parts of it will be dark-colored, and sometimes green. To distinguish a chicken from an old fowl, see that the lower end of the breast-bone is soft like gristle, and that the spurs (of the male) are soft, loose, and short; when old the comb and legs are rough, the spurs hard and firmly fixed, and both cock and hen have a hard breast bone. The very young broiling chickens are about the size of a quail or partridge; of these select the plumpest. Never take chickens of any kind which have been brought to market dead and with the entrails in; and never eat them until they have been dead at least eight hours. Before cooking chickens wash them out well in two waters, then if there is any odor in the cavity add a little soda to the water and wash them out again.

Boiled Chicken.—Prepare the fowl as above. Make stuffing of one cupful of bread-crumbs, one tablespoonful of butter, one egg, half a teaspoonful of salt, and one tablespoonful of sweet marjoram; mix them well together, and



Chicken for Boiling.

stuff in as much as the fowl will hold. Put the fowl into a pot of water in which a piece of salt pork has been boiling for some time, and boil steadily from one to two hours according to size. Pork is not absolutely necessary in boiling chickens, but it greatly improves it; if not used add some salt to the boiling water. A chicken should never be boiled unless it is old and tough.

Broiled Chicken.—Chickens for broiling should be young and tender; if at all tough suspend them for half an hour over the vapor of a steaming kettle. Split them down the breast; salt both sides and butter them slightly; then lay them inside downward on a buttered gridiron and broil till brown, turning them several times. It will take from a half to three-quarters of an hour. When done, butter them well and serve smoking hot.

Broth (Chicken).—Boil a chicken until the flesh separates from the bones, then skim and season with a little salt. A little rice may be added, and if desired a sprig of parsley may be

used to flavor it. This is an excellent food for invalids and will be relished when the stomach rejects almost everything else.

Croquettes, (Chicken.) *See* CROQUETTES.

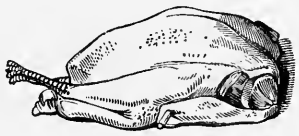
Fricassee (Chicken.)—Joint the fowls, wash and put them in a sauce-pan with hardly enough cold water to cover them; add half a dozen thin slices of salt pork and one or two grated onions; heat slowly and boil very gently until the chickens are tender; then season with pepper, add half a pint of milk, two well beaten eggs and two tablespoonfuls of flour mixed to a smooth cream with a little of the milk; stir slowly while it simmers for a few moments, then serve hot, having placed the breasts across the centre of the platter and arranged the legs and wings around them; garnish with rice boiled dry.

If it is desired to have the chicken brown, stew it without the pork, meanwhile fry the pork, and when the chicken is tender take it out of the pot, and fry it in the pork fat until it is a light brown, adding a little minced parsley; then dish and pour the gravy over it.

Fried Chicken.—Chickens for frying must be young and tender. Joint them, wash and wipe them dry. sprinkle pepper over them, and roll them in flour. Fry some salt pork until all the grease is extracted; and in this fat fry the chicken until each piece is a rich brown on both sides. Dish (in a hot dish), and make a gravy by adding to the fat and a teacupful of milk, a tablespoonful of flour; pour this gravy over the chicken and serve hot. Or the chicken may be served without gravy.

Pot-pie (Chicken).—Cut a large chicken into six or eight pieces, and also half a pound of salt pork; put a pint of hot water into a pot, lay in some of the pork, then a layer of the chicken, then some paste dumplings, and above these some boiled potatoes sliced: cover with a thick pie-crust, slit this crust across the top, heat slowly and boil for an hour and a half or two hours. Brown the crust by putting a hot oven-lid over the pot for some minutes; remove this crust without breaking; empty the chicken into a dish and place the crust over it.

Roast Chicken.—Wash the chicken clean; stuff as directed for boiling; baste thoroughly with butter or lard; and roast about an hour,



Chicken for Roasting.

turning it frequently. Stew the inwards till tender, and till only a little water remains; cut them up fine; mix in gravy from dripping-pan, thicken with browned flour, and season with butter, salt, and pepper. Crab-apple or cranberry sauce is excellent to eat with it.

Salad (Chicken).—This is made of cold chicken. Take the meat from the bones and cut it up into very small pieces; cut the white parts of celery into pieces about half an inch long, and mix about as much with the chicken as there is of the latter. Just before it is sent to the table, pour over it a dressing, made as follows:—Mix one even teaspoonful of dry mustard, two of salt, one and a half of vinegar; and a pinch of cayenne; add a raw egg, beat it well, and then beat in thoroughly half a pint of sweet oil, as it is added in a thread-like stream; flavor with vinegar or lemon juice. Arrange the delicate leaves of the celery around the edges of the dish. Crisp and tender lettuce may be used in the salad instead of celery. It is customary to eat bread and butter or crackers with chicken salad.

Stewed Chicken.—1. Cut the chicken into pieces as for frying. Put them in a sauce-pan with a tablespoonful of butter, and let them remain until slightly browned; then take the chicken off, and stir into the gravy two teaspoonfuls of flour, one onion minced fine, halfa dozen sprigs of minced parsley, and half a teaspoonful of salt. Add a pint of broth (or half a pint of broth and half a pint of wine), put the chicken back into the pan, stew gently till tender, and serve with the sauce.

2. **(With Celery.)**—Select a tender chicken of medium size, stuff as for boiling, and put it in a sauce-pan or pot. Cut a large head of celery into small bits, mix it with an onion minced fine, and season with white pepper, salt, and a teaspoonful of mace; put this all around the chicken, cover the whole with boiling water and set it where it will simmer for two hours or until done. Dish the chicken, and prepare a gravy for it as follows: mix together three ounces of butter and two tablespoonfuls of flour, and stir it into the gravy in the sauce-pan; add a teacupful of cream, let the whole come to a boil, and pour it over the chicken.

CHICKEN POX.—A disease of a very mild character to which infants and young children are liable. It is usually preceded by a slight feverishness, and after two or three days a few reddish spots, small oval blisters like pearls, appear about the shoulders, chest and arms, and sometimes on the face and head. These blisters are accompanied by considerable itching, which causes them to be soon broken; and about the fifth day they begin to dry up into scales, which fall off in a few days, leaving a slight discoloration and occasionally a slight pitting of the skin. Sometimes, in delicate children, the blisters become pustular, and are accompanied by high fever; but in general the disease is unattended with danger, and requires no other treatment than attention to diet, laxative medicines and cooling drinks. Care must be taken, however, lest the child catch cold during this trifling disease, or serious lung disease may result. Chicken pox is contagious

CHICORY, or Succory, or Wild Endive, is a plant belonging to the dandelion family, and grows wild in many portions of the United States, and in most parts of Europe. It blossoms here in August and September, and may be easily recognized by its bright blue flowers. In its wild state, chicory sends up a stem from one to three feet in height, though under cultivation it often attains six feet. The young shoots and leaves are very generally used in France for salads, sauces, and the like, and the green root is said to equal parsnips when cooked in the same way; but at present the root only is employed to adulterate coffee or to make a separate beverage; probably half the ground coffee sold in this country contains fifty per cent. of chicory. Large crops of it are raised for the acknowledged purpose of adulterating coffee. The roots are dried, cut into bits, and roasted; when ground it is of the same color as coffee, but it has neither the essential oil nor the aromatic flavor of coffee. In fact it has been found by chemical analysis that chicory possesses but few elements in common with coffee, and contains very little of the nutritive properties so often claimed for it. It cases where it is used for a long time its effects are often deleterious, especially upon the nervous system. For this reason, notwithstanding its cheapness, and its agreeable taste, it cannot be recommended as a beverage. (*See* ENDIVE.)

CHILBLAINS.—These are simply a mild form of frost bite; though not dangerous they are troublesome, and if neglected, may produce sores which may last all winter. As they usually appear, the skin (generally of the toes, heel, or ball of the foot) is reddened and somewhat swelled, painful on pressure, with considerable tingling and itching; if severe they sometimes proceed to ulceration. When they are formed but not broken, rub them well two or three times a day with a lotion made of equal parts or turpentine and laudanum; or sweet oil and spirits of turpentine; or make an ointment of dry mustard and lard (a teaspoonful of mustard to an ounce of lard). The opiate liniment of the Pharmacopœia is an excellent application. If the skin is broken none of the above must be used. Make an ointment of pure mutton suet and powdered chalk, by stirring the chalk into the melted suet; or mix warm suet with whiting to a stiff paste. Spread on a piece of linen, and apply to the sore, wrapping it up in a bandage, or still better get a drachm or two of red precipitate ointment from the apothecary. Chilblains, when once they have formed lodgment, have a tendency to return every winter; persons liable to them should avoid sudden alternations of heat and cold, and may bathe the threatened parts in alcohol, or stimulating lotions. When their feet are cold and damp, they should at once put on dry stockings.

CHILDREN.—Medical writers have found it convenient to divide childhood into two distinct periods: first, that of infancy, which extends, to put it in round numbers, to the end of the second year; and second, that of childhood proper, which ends only when the children have reached maturity. The rules to be laid down are so different in the two stages that they can very well be separated from each other, and we shall treat here only of children who have entered upon the second period; for what we have to say of very young children *see* INFANTS.

Of course there are many suggestions which apply equally in both stages; it is always important, for instance, that the nursery should be thoroughly ventilated, that the most scrupulous cleanliness should be preserved in it, and that the daily bath for each child should be considered not a luxury but a necessity. This latter is often neglected, but it is really essential to perfect health. Vital processes are much more rapid in children than in adults, they throw off a larger portion of refuse matter proportionately in a day, and enough of this refuse is discharged through the skin to render a complete bath each day necessary to cleanliness. If this is given rightly, children will soon learn to enjoy, and even demand it; but there are one or two facts which must be borne in mind. Some children have a nervous horror of cold baths who will take kindly to a tepid one; and others seem to have a hearty preference for the cold. It is safe in such cases to consult the child's wishes, though after the period of infancy it is desirable to accustom them to baths not warmer than lukewarm,—frequent warm baths have a debilitating effect. It is not necessary to use soap every time children are bathed, and when it is used it should be purified white or castile soap. (*See* SOAP.) Care must be taken that the child is wiped dry, and a gentle friction is excellent for the skin.

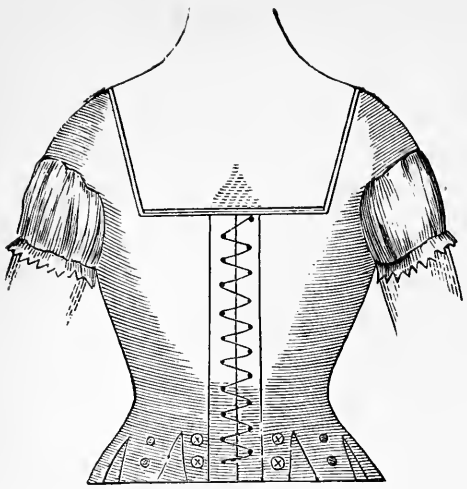
Diet.—The time of weaning is the most critical period in a child's early life, and great caution must be observed in introducing it to new food. Even if it has been "raised on the bottle" the time has now come when the diet must be amplified, and this is a matter of such importance that the mother should keep a constant oversight over it and put a stop at once to the use of any article that is found to be injurious. "The rule should be scrupulously adhered to, and only the simplest and most easily digested food is to be used. Spiced dishes; those which are commonly called very rich, that is, in which there is a great deal of butter or fatty substance; pickles of all sorts; most fruits preserved in thick syrup;—all this class of substances are to be absolutely forbidden. Milk may still be freely allowed, and should constitute at least a large part of at least one meal every day. The ordinary simple vegetables may generally be used if well cooked, except cabbages, green corn and beans, whether green or dry. The vegetables which are eaten uncooked should be forbidden, as they are, without exception, difficult of digestion. Most nuts and dried fruits are injurious; boiled

chestnuts ought to be prohibited. Sugar is often blamed for much that it does not do. When given at meal times, and in moderate quantities, I do not remember to have seen it do any harm. Candies, however, I do not include in this remark. These are often injurious from the effect of other ingredients than the sugar; those which are painted are especially to be avoided, the paint often containing very poisonous compounds of lead, arsenic, and other metals."* A white potato, roasted, not boiled, should be the first vegetable given to a child; but in the summer time its effect should be carefully watched, and if the stomach is deranged it must be discontinued. One of the most fruitful sources of sickness with young children is giving them animal food indiscriminately, and too often. Beef, mutton, and chicken are the only articles fit for children; duck, goose, and poultry in general ought to be avoided.

There is probably no practice more injurious than that of allowing children to eat at short intervals through the day. It is necessary that the stomach should rest between meals. "After a certain amount of food has been taken into it," to quote again from Dr. Parker, "digestion commences, and if no more than proper is eaten, or it be not too unmanageable, it is all dissolved and passed into the intestines. After the stomach has thus disposed of a meal, it ought to have time to rest, for it is no more possible for the stomach to keep digesting all the time, than it is for the legs to keep walking all the time. If it is attemped to make it do so, it becomes exhausted and weakened, and then cannot digest even proper quantities of simple food. This produces what is generally known as dyspepsia, and is attended by sour stomach and many other inconveniences." The rule should be that children, as well as grown people, should have regular hours for their meals, and not be allowed to eat between them. They will usually be willing to go three or four hours, and they can be allowed to eat oftener than adults, provided it is at regular times.

Dress.—The human body, like any other thing of greater warmth than the surrounding air, has a constant tendency to part with its excess of heat by radiation, of course the greater the surface exposed the more readily will radiation occur; and yet, in compliance with a reckless and ignorant fashion, we constantly see children with arms, chest, and legs bared in the coldest weather. Of the danger involved in this, a distinguished Paris physician says:—"I believe that during the twenty years I have practised my profession in this city, 20,000 children have been carried to the cemeteries, a sacrfice to the custom of exposing their arms naked. Put the bulb of a thermometer in a baby's mouth, the mercury rises to 99°. Now carry the same to its little hand; if the arm be bare, and the evening cool, the mercury will sink to 50°. Of course all the blood that flows through these arms must fall from 10° to 40° degrees below the temperature of the heart Need I say, when these currents of blood flow back into the chest, the child's vitality must be more or less compromised? And need I add that we ought not to be surprised at the frequent recurring affections of the tongue, throat, and stomach? I have seen more than one child with habitual cough and hoarseness, choking with mucus, entirely and permanently relieved by simply keeping the hands and arms warm." Children should not only be warmly clad, but every part of the body should have equal protection. The low-necked, short, and sleeveless dresses in which mothers are so fond of showing off young children, is a vanity which cannot be indulged with safety in all latitudes and seasons. During the severe winters in the northern portions of our country, there should be no portion of the surface of a child's body exposed to the external air. It is folly to attempt to "harden" it by exposure; the skin in a healthy condition is always soft, and open, and always retains its sensibility to changes of temperature. Our houses are so warm, however, that it is well to make a marked difference between indoor and outdoor clothing; this is best done by relying for extra warmth upon coats, cloaks, furs and such exterior garments as can easily be put on and off. If the ordinary clothing be too heavy, that worn on going out is apt to be too light to protect the body against the difference in temperature, a danger which is especially to be avoided. Children's clothing should be made so as to fit loosely and easily, and to give free play to every kind of exercise of body and limb. Especially should no portion of it be allowed to bind tightly any portion of the frame. Not only will the tightening of the dress cause permanent distortion, and thus defeat the very ends for which such dresses are used, but will so interfere with the regular circulation of the blood and action of the various organs as to produce functional derangement, and often fatal disease. As the children grow up, the clothing of the boy is generally sensible enough; but in the case of girls the pernicious practice of wearing corsets and tight belts is too often permitted by mothers in weak deference to a fashion which is not only very unhealthy but perverted in taste. "The proper way to dress a young girl," says Miss Beecher, in her "American Woman's Home" "is to have a cotton or flannel close-fitting jacket next the body, to which the drawers should be buttoned. Over this place the chemise; and over that such a jacket as the one here drawn, to which should be buttoned the hoops and other skirts. Thus every article of dress will be supported by the shoulders. The sleeves of the jacket can be omitted, and in that case a strong

* The Hand-book for Mothers; a guide to the care of young children, by Edward H. Parker, M. D., New York.



Under Jacket for Girls.

lining, and also a tape binding, must surround the arm hole, which should be loose."

Concerning their night dress, if the child should be in the habit of constantly kicking off the covering it is well to substitute for the ordinary night-gown, a pair of drawers with a body reaching up to the neck and with legs long enough to cover the feet. It can open either behind or in front, and has the advantage for the child, that if it does kick off the coverings it is not entirely exposed. The thinness of the material of which it is made should vary with the season; red flannel is excellent in winter. For directions for cutting children's clothes, *see* CHILDREN'S CLOTHING.

Signs of disease.—To those who are not accustomed to the care of children it seems a difficult matter to ascertain when they are sick, or this being known, to tell what is the matter. There is not, however, as much difficulty as might be anticipated; but in order that the physician may form a right judgment it is necessary for the mother to observe carefully any peculiarities which the child presents. Even before children talk, or learn the sign language which precedes speech, they give very certain indications of sickness; and these must form the basis of any intelligent treatment. The healthy child is usually very active; its eye is bright, and it is almost constantly running about or occupied with its toys. When the child becomes sick this ceases. The eyes become either dull and heavy or else extremely bright; it lies still, or if it runs about, it is languidly and with difficulty, and but for a few moments. When this is observed, the child should be watched for further symptoms. Some of the earliest and most common signs of disease are derived from the heat of the body, which changes both generally and locally.

In health the skin of the child is warm, and the surface feels smooth and soft. In a great many diseases it becomes very hot throughout its whole extent, giving to the hands and head especially a sensation of burning, while the skin seems rough and hard. This dry, burning, general heat does not imply the existence of any special disease, but it shows that there is some disturbance of economy, the cause of which should be looked for and if possible removed. The palms of the hands in particular are often found to be unusually hot, and by the early observance of this symptom the physician or the parent may obtain a clue to the existence of other disturbances. Still the child is not to be considered sick for this reason only. Generally it only indicates the necessity of providing less fatiguing sports, or longer periods of rest for the child; or else of guarding against any undue excitement to which it may be subject. The head is another part of the body which is frequently too hot. This is perceptible to the touch of the hand, and is sometimes greater on the forehead and again in the back of the head. When this is slight it is not necessary to take much notice of it; but ascertain, if possible, whether or not there is any apparent cause for it. When it becomes very marked, if there is no vomiting, or twitching of the arms or face, or any other indications of illness, it can be allayed by bathing the head with cool (not very cold) water. If the child is constipated, a mild purgative may be used, say half a teaspoonful of spiced syrup of rhubarb, sufficient to produce a single movement. If, however, the heat of the head increases and becomes very great, the child tossing its head from side to side, or rolling it unceasingly; or if there are any twitchings of the face, eyelids, or mouth; or if the child cries with pain, putting its hands to its head, starting suddenly in its sleep, or waking with a frightened air, then a physician should be called in without delay. Excessive heat of the chest and abdomen also frequently accompanies diseases of the bowels, or indicates the approach of a fever. Here it is not necessarily a serious sign, though, when a child is ailing, it is well to notice whether or not it exists.

The head and face also give by their position, indications of importance, which should not be overlooked. Rolling the head from side to side is a common accompaniment of brain disease, but it is not a certain indication of it, as is thought by some. It should lead to increased care and attention, a more minute observation of the condition of the child, but it need not be regarded as a sign of disease beyond relief. The general expression of the face may be that of pain or of listlessness, of suffering or of that indifference to everything which is scarcely less pitiable in a child. A heavy, dull look is among the earliest indications of ill-health. Most of the ordinary disturbances are accompanied by this change in the expression, which experienced mothers learn to interpret by saying that the child does

not look well. The cause of it should be sought, and, if possible, removed; it may be the only indication which is apparent of a headache, or it may be the first announcement of a fever.

Languor and approaching fever are often made known by the mode in which the eyelids are raised; great heaviness of the eyes is a sign not to be neglected at any time, and inability to raise the lid should be at once made known to the physician. This is perhaps the best place to add that to see a sick child shed tears is always a good sign. When it occurs after a protracted or a severe illness, it may be looked upon almost as a crisis, furnishing decided evidence of improvement.

Dr. Parker, to whom, together with Drs. Combe and Jacobi, we are indebted for most of these suggestions, says:—"When a child gives any indications of being unwell, it is wise to notice, especially if there is excessive heat of the head, whether or not light and noise trouble it. If on being carried towards the window it shuts its eyes, wholly or in part, wrinkling them with that expression that adults have when they have a headache and shun the light, it should be reported to the physician. This accompanies simple headache in children, as well as in adults, but is sometimes of more importance. If noise troubles the child it will, if able to talk, say so; but if not, there will be increased restlessness, a cringing when the door is shut violently, and an evident effort to avoid every jarring sound. When this is noticeable, it is best to seek a physician's advice."

It will have been observed that we have not intended to enter here upon the treatment of special diseases, but only to point out those symptoms which are the preliminary stages of all sickness, and which in the case of children are especially important. In these stages the care and watchfulness of a mother are indispensable supplements to the physician's skill, and may frequently be a substitute for it; and so important is a precise knowledge of their bearings upon health and disease that mothers would do well to give them careful study. For the special diseases, *see* CROUP, DIARRHŒA MEASLES, SCARLET FEVER, ETC.

CHILDREN'S CLOTHING.—The garments worn by children are in almost every case adapted from those of older people. Hence in giving directions about making clothing generally, we give all that is of importance in reference to children's wear. Under almost every topic we add suggestions of the manner in which this garment or that may be made suitable for a child, and often, it is but to make the garment smaller and it is at once available. For example, the reduced circular is the baby's cloak; the capeline suggests the child's "red riding-hood;" various patterns of caps make various kinds of juvenile head-gear, while the directions for making different dresses, the Princesse, the basque, and the blouse waist, are easily altered a little as suggested under each head to produce a garment entirely suitable for a little girl. The child's sacque and round jacket are much like that of the grown person; the little child's under garment, drawers and waist in one, is made from the same pattern as the bathing-drawers and the infant's long robe is an adaptation of the French chemise-pattern. (*See* UNDERGARMENTS).

Hence it has seemed desirable not to occupy space with the repetition of what can be better explained elsewhere, and it is merely our object here to refer the reader, searching for directions in making children's garments to the different topics under which they will be found suitably explained.

CHILLS AND FEVER. (*See* AGUE.)

CHIMNEYS.—The causes of smoky chimneys are generally faults of construction. Every chimney-flue should be built of equal dimensions from bottom to near the top, with no projections or irregularities in it, with as few changes of direction as possible, and with the inside surface smooth and regular. For these reasons, smooth round earthen pipes make excellent flues. But pipes used for smoke flues should be unglazed, highly glazed ones do not absorb the acids from the smoke, but let them drip. At the top, however, it should be slightly narrowed, as this causes the smoke to be ejected with more force, and diminishes the volume of descending currents. As a general rule, the longer the flue the stronger the draught, and for this reason tall chimneys seldom smoke; the lengthening of a flue by a few feet will frequently remove all tendency to smoke. If a flue serves for more than one fireplace or stove, it is in many cases impossible to secure a good draught; sometimes it will work well, but by far the best rule is to have a separate flue for each fire. The ordinary size is 8 x 8, or eight-inch round pipe. The maker of the furnace or any other special heater, should be consulted regarding the size of the flue needed. In blocks of city buildings, the circular clay pot, so universally used in most European cities, is the best form of capping chimneys, especially where there are a number in one stock. This arrangement allows of a free circulation of air between each flue, thus preventing the escaping gas entering an adjoining flue. (*See* CLEANING.)

The fireplace may either be too wide or too high in front; or the throat may be too large for the smoke; it should be only large enough to carry off the heated air, and should open into the fireplace at as abrupt an angle as possible.

A high building or a tree standing close to the chimney and overtopping it, often disturbs the draught. The wind passing over these objects, falls down like water over a dam, and stops the ascending current so that the smoke is forced back into the room, or the wind may strike against the higher object, and, rebounding, may form eddies, and thus beat down the smoke. The remedy for this is to increase the height of the chimney or to mount it with a *turncap* or *cowl*, which is so constructed that

the effect of any passing wind is to draw off the air and smoke from the chimney.

It is well known that a smoky chimney is often relieved by opening a window or outer door; when this is the case it is a sign either that there is not enough air to supply the draught for that particular chimney, or that some other fireplace in the tightly closed house with a strong draught and without any easy source of supply is being furnished with air for combustion by means of a downward current, established through the other cold flue, which is thus made to reverse its intended action, and the fire consequently parts with its smoke into the room instead of up the chimney. When, under these circumstances, an outer door or window is opened, the immediate supply of fresh air is so considerable, that the demand for down draught anywhere in the house no longer exists, and an ascending current is easily secured in any of the flues. This result will be a permanent one after the window or door is closed again just so long as all the fires (in the absence of special provision) can draw enough air for their combustion through door or window crevices.

Currents of air through a room, as from door to door or window to window, when open, may counteract the chimney draught; or a door in the same side of the room with the chimney may, when suddenly opened or shut, whisk a current across the fireplace to be followed by a puff of smoke. The remedy is obvious. When there are two fireplaces in the same room, or in rooms communicating by open doors, both are very likely to smoke and one is certain to do so unless in the first case a very large supply of fresh air is provided; in the second the door should be shut. Any hole in the flue, such as an opening for a stove-pipe, or a dislodged brick, will be very likely to cause a poor draught. Where ventilating openings are needed in the same chimney with smoke flues, they should be separated from the smoke flues. A simple way is to divide a large flue with a metal plate. The heat in the smoke part will thus cause a draft in the ventilating part.

CHINA. (*See* EARTHENWARE.)

CHINTZ.—A calico printed in a peculiar pattern in which flowers and other devices are printed in five or six different colors upon a white or colored ground. The only articles of dress for which it is used are morning wrappers and dressing-gowns; but it makes very pretty lambrequins and bed-hangings, and is now much used for covering bedroom sofas and chairs. It comes in pieces a yard wide.

To clean.— Take two pounds of rice, and boil it in eight quarts of water till soft. When done, pour the whole into a tub; let it stand till about the warmth used for colored linens, then put the chintz in, and use the rice instead of soap; wash it in this till the dirt is out; then boil a second quantity as above, but strain the rice from the water, and mix it in warm water; wash in this till clean; afterwards rinse it in the water the rice has been boiled in, and this will answer the end of starch, and no dew will affect it. If a gown, it should be taken to pieces; and when dried, be careful to hang it as smooth as possible. After it is dry, rub it with a sleek stone, but use no iron.

If the chintz is very dirty it may be scoured with ox-gall and water, which will not injure the colors.

CHITTERLINGS.—The intestines and fat of hogs, calves or other animals prepared in a special way for cooking. They are taken from the hog while warm; then the entire gut is slit or cut open, well cleaned, and they are ready for use. To cook, wash them out in fresh water, put them in a frying-pan containing some hot fat, and fry them till brown. Though not a delicate dish they are not disagreeable, and, like tripe, are very easily digested.

CHLORAL.—POISON. *Symptoms.* Slow, noisy breathing, excessive drowsiness or unconsciousness. *Treatment:* Artificial respiration. *See* DROWNING.

A colorless dense liquid, of a caustic taste and suffocating odor, formed by the action of chlorine on alcohol. It has a very soothing influence, and now enters largely into the treatment of nervous diseases. The dose is from ten to fifteen grains in a little water. More than this should never be used except as prescribed by a physician. Several lives have been lost lately on account of the general impression that chloral is harmless.

CHLORIDE LIME. *See* DISINFECTANTS.

CHLORODYNE.—A recent remedy for neuralgia, patented by Dr. L. C. Browne, Jr., is supposed to consist essentially of chloroform, Indian hemp, morphia, and hydrocyanic acid. The dose for adults is 20 to 30 drops.

CHLOROFORM. — POISON. *Symptoms:* Unconsciousness, stoppage of respiration, and feeble action of the heart. *Treatment:* Draw out the tongue (with forceps or pincers, if necessary), and produce artificial respiration as with the drowned (*see* DROWNING). In some cases it has been found efficacious to have the legs placed over an attendant's shoulders, and the body raised so that the head will be lowest.

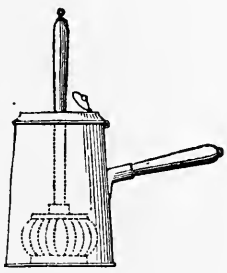
A mixture of alcohol, water, and chloride of lime rectified. It is a clear, limpid fluid without color, of an agreeable pungent odor, and very sweet taste. It is very volatile, evaporating with great rapidity when exposed to the air, and soon loses its strength. Before using drop a few drops into water; if the chloroform is pure they will fall to the bottom without becoming milky. When taken internally, chloroform acts as a sedative, narcotic, and antispasmodic; it is also employed sometimes as an external application for relieving pain. By far the most important use to which it is put, however, is that of an anæsthetic. There it always a certain amount of danger in taking chloroform, even under proper advice, and it should be borne in mind that *no one* can take it with safety on his own responsibility. It should under no circumstances be taken by

persons liable to epileptic attacks, congestion of the brain, or disease of the heart; or by any one immediately after meals. (*See* ANÆSTHETICS.)

CHOCOLATE.—A substance made from the seeds of the cacoa-tree which grows extensively in the West Indies and South America. The seeds are about the size of an almond, and when broken into small pieces are subjected to great pressure until they are reduced to a rough powder, after which they are mixed with sugar and rolled into a very thick paste, or into a very fine powder, called Chocolate. Chocolate is less exciting to the nervous system than tea or coffee, and at the same time it contains a much larger proportion of nutritive matter. Its flavor, moreover, is not lessened by the addition of milk, so that it may be boiled in milk only and thus produce a most agreeable and nutritive food. "There are, therefore," says Dr. Edward Smith, "many persons, states of system, and circumstances, in which its use is to be preferred to either tea or coffee."

To prepare for the table, break five ounces into bits and melt over the fire with one gill of boiling water; add gradually, three gills of water (making in all, one pint); and, when boiling, add a quart of hot milk; let it boil a few minutes, then serve. It may be sweetened either on the fire or at the table, (*see* CARAMEL.)

The reader will probably understand the use of the chocolate-mill shown in the engraving; but it may be as well to observe, that it is worked quickly round between both hands



Chocolate Mill.

to give a fine froth to the chocolate. It also serves in lieu of a whisk for working creams, or jellies, to a froth or *whip*.

Iced Chocolate.—Set four ounces of grated chocolate over a slow fire in a tin pan with two tablespoonfuls of water; when dissolved take it from the fire; add nearly a teacupful of warm water and work it thoroughly with a spoon; then mix it with an equal quantity of cold syrup of sugar, freeze and serve.

Broma is a preparation of chocolate and arrow-root.

CHOCA.—This is made by mixing a cupful of chocolate (prepared for table) with a cupful of coffee. It is a very pleasant breakfast drink.

CHOKING.—Get on all fours, or lean over the back of a chair, and cough. A violent slap with the open hand, between the shoulders, will often effect a dislodgement; but if this fails after being repeated once or twice, look into the throat and see if there is anything that can be reached with the thumb and finger and if so pull it out. An obstruction can generally be carried down by swallowing pieces of bread or potato slightly masticated or, better still, a raw egg, fresh from the shell and with its original consistency broken as little as possible. Sometimes the obstruction will go down too far to be reached by the fingers; in such cases copious draughts of water should be swallowed rapidly, and if this fails to remove it give mustard water or any other emetic. Should vomiting fail to bring up the obstruction, then mechanical means must be tried. Take a long spoon, bend it slightly, make the patient throw his head well back, and push the handle boldly down the throat; if it is kept well to the back of the throat no harm can be done. The same operation may more conveniently be performed by a bit of sponge attached to a piece of whalebone. Occasionally substances will get into such a position in the throat as to necessitate a surgical operation, but these are not usually the cases in which there is immediate danger of suffocation, and there will be time enough for the doctor to come.

CHOLERA.—It is impossible to give *very* minute directions for unprofessional treatment and fortunately they would be superfluous, as cholera very rarely occurs in this country in places where physicians are not to be had. In its first stage (the so-called stage of invasion) cholera is very similar to the ordinary summer complaints. As during the prevalence of cholera, diarrhœal troubles are likewise extremely common, it is not possible at the outset in any given case to predict the termination, but though some of the cases may be harmless, many of them do ultimately pass into cholera. The importance therefore of checking these preliminary discharges cannot be too earnestly impressed upon the public. *The pre-eminent symptom of developed cholera is* excessive watery purging, frequently though not always unattended with pain. The passages from the bowels afterwards become thin, pale, slightly turbid, like rice-water, without any offensive smell, and all control over the bowels is in a great measure lost. In a short time vomiting takes place, cramps in the limbs are developed and in a few hours at the longest the strength of the patient is gone, the body, the tongue, and even the breath are quite cold, and the nails turn blue. There is great thirst, and usually constant vomiting; the eyes sink far into the head, and a change takes place in the voice, which becomes a small squeaking whisper, so unnatural and so peculiar that certain physicians who have seen much of cholera, could distinguish it by the voice alone.

Recoveries from cholera, after it has once taken hold upon the system, do occur, though

the prospect is not encouraging. The time to arrest the disease is in its early stages, and not a moment should be lost. During a cholera epidemic, with the first symptoms of diarrhœa, get the patient to bed, and apply mustard over the bowels. Thirty drops of laudanum may be given to a grown-up person with hot brandy and water, and a physician should at once be sent for.

Cholera is most likely to visit damp, dirty places, where the water is not good, and people who are dirty and intemperate have less chance of recovering from it. Persons in attendance upon cholera patients do not appear especially predisposed to the disease. It is believed, therefore, that they may be safely nursed by their relatives and friends.

It is well to take the following precautions: where sickness does not as yet exist, water-closets, drains, etc., should be disinfected, care should be taken that the water is pure, and no cabbage or other green vegetable should be included in the diet. The discharges should be mixed with dry earth and if possible buried at a distance from the house, the bed-pans should be washed with copperas, and the bed-clothes upon which a cholera patient has been lying should be subjected to prolonged boiling before they are used again.

CHOLERA INFANTUM.—This disease usually occurs between the third and twenty-third months. It is caused by improper food, or too much food, impure air, hot weather, and never by teething alone. Its first symptom is generally a slight feverishness, and this is followed by a diarrhœa with thin watery discharges, and a little later by vomiting; sometimes the vomiting and diarrhœa commence at the same time, and these are the worst cases. Emaciation begins very soon, or within a few days, the hands and feet become cold, the head and surface of the abdomen hot, the face pale and shrunken, the eyes dull and heavy, and the pulse irregular and quick; by degrees the child becomes sleepy, and finally sinks into a state of insensibility.

Treatment. — At the first symptom of cholera infantum, a physician should be sent for. Put the child into a warm bath, or apply flannels dipped in hot water to the bowels, and keep in an ordinary posture. If a physician cannot be had, dissolve a teaspoonful of gum-arabic in an ounce of peppermint water and give a teaspoonful every half hour. A milder astringent may be made thus:—mix together three ounces of chalk mixture, half an ounce of tincture of kino (or catechu), and half an ounce of compound tincture of cardamoms. Of this the dose for a child eighteen months old is one teaspoonful every two hours if the discharges are frequent, and at larger intervals if not—care being taken to shake the bottle before pouring out the medicine. If there is much thirst, give 6 or 10 drops of brandy in a teaspoonful of water, or mucilage, every 15 or 20 minutes. It is of the greatest importance that the stomach of the child be at rest. Therefore, for some hours no food or drink should be given. Further than this, nothing can be done without the advice of a physician.

CHOLERA MORBUS.—This is usually caused by improper food, such as green or decayed fruit and bad vegetables. It commonly comes on in the night, and is marked by sudden and severe vomiting, followed by purging and accompanied by severe cramps, generally in the bowels and sometimes in the legs. Another feature of the disease is thirst, though the skin is quite cool.

Treatment.—Put the patient to bed, cover the bowels with a mustard plaster, and keep him on his back till the vomiting and purging have ceased for several hours. Laudanum and tinct. of camphor in doses of 10 to 15 minims each may be given, and if immediately vomited should be repeated. If rejected a second time, 30 drops of laudanum may be added to a little thin starch and given as an injection. The remedy may be repeated every hour until the vomiting and purging are arrested. To attain prompt success in the treatment, it is important, while vomiting continues, to withhold liquids, which from the intense thirst are usually craved by the patient. Pieces of ice placed in the mouth assist the patient in enduring the necessary act of self-denial. When the patient begins to crave food, a cup of hot tea will probably throw him into a perspiration: before that nothing but the medicine and bits of ice should be given.

CHOPS. (*See* MUTTON.)

CHOW CHOW.—A name given to a kind of mixed pickles originally brought from China, but now made in this country by simply taking equal quantities of the various kinds of pickles, mincing them up fine, and mixing them together. A nice way to prepare is to make the chow-chow and then fill the large bell-peppers with it after first removing the veins and seeds.

CHOWDER.—This popular dish is made in many different ways, and of several different kinds of fish, besides clams. The following receipt for clam chowder is from an old club-house caterer:

Clam Chowder.—Fry half a dozen slices of salt pork, chop it up into rather small pieces, and sprinkle them over the bottom of a pot; place over this a layer of potatoes cut into small pieces; over this a layer of minced onions; and then a layer of clams, with some small crackers (split) on the top. Season with salt and pepper, and if desired a little thyme and a few cloves may be added. Pour on this a portion of the fat left from frying the pork, and then put in another course of layers as before. Repeat the process until the pot is nearly full, or until enough is in, and season each time. Then cover with water, set over a slow fire, and boil about three-quarters of an hour. When nearly done, stir gently, finish cooking, and serve hot. If it is found too thin when done, boil a little longer; if too thick, add a little water. Whether the chowder is thick or not, however, will depend on the amount of

potatoes and crackers used. Send around walnut pickles with the chowder.

Fish Chowder.—This is made exactly like clam chowder, fish cut up into small pieces, being substituted for clams. The best fish for chowder are haddock and striped bass; but cat-fish make a very nice dish. Fish chowder may be pleasantly flavored with lemon juice.

CHROMOS.—Chromos are simply engravings printed in colors by a process which resembles lithography. In some few instances they are very good, but as a general thing they are far less desirable than steel engravings at the same price. Since there are so many of them in our houses, however, and since they are often framed in such a way as to be unprotected from dust and dirt, it may be well to know that the kind apt to be framed without glass can be cleaned by moistening a soft cloth in lukewarm water and gently washing the face of the picture, afterwards wiping it dry. The varnish protects the colors. (*See* PICTURES.)

CHRYSANTHEMUM.—This flower blooms so late in the season that it is frequently called the "Christmas flower"; and as it fills a place in this respect occupied by no other flower it should be cultivated in every garden. Chrysanthemums grow very vigorously in a rich light soil (a light admixture of sand is good for them); and are entirely hardy except at the extreme north, where they must be wintered under sods. They are most easily propagated from cuttings, taken in August, or from the shoots sent up by the roots after blooming; they may be obtained of any florist. Good specimens should have but one stem with short, thick-set branches, which may be made to grow by pinching off the end shoots, thus encouraging the side branches. They should be watered liberally, and liquid manure is very good just when the plants begin to bloom.

There are three varieties of chrysanthemums: the large-flowered kind, most suitable for outdoor culture; the dwarf or Pompone, which blooms beautifully in-doors; and Japan Chrysanthemums. Of the large-flowering kind, choice varieties are:—*Alarm*, crimson; *Annie Salter*, canary yellow; *Boule d'Or*, a golden yellow; *Boul deNeige*, pure white; *Captivation*, light purple; *Cassy*, orange and buff; *Erecta Superba*, clear sulphur-yellow; *Heormine*, silver white; *Prince Albert*, crimson red; *Mount Ætna*, fiery crimson; *Queen of England*, blush; *King of Yellows*, yellow; and *Vesta*, white. Of the Pompone, or dwarf kind, the best are:—*Acton*, golden yellow; *Andromeda*, cream color; *Christiana*, canary yellow; *Mrs. Dix*, blush; *Iris*, white tipped with rose; *Miranda*, bright rose; *Riquiqui*, violet plum; *Roi de Lilliput*, maroon; *Soulanges*, pure rose; *Theresita*, lilac; and *Trevenna*, pure white. Japan Chrysanthemums are novelties from Japan, with tasselled or quilled flowers. The finest are *Mons Bonnet*, amber; and *Laciniatus*, creamy white.

CHUB.—A fish of which there are several varieties; *lake chub* or lake dace, the *blue sucker*, and the *chub of New York*. They are all fresh-water fish, shaped like the perch, covered with large coarse scales, and generally small in size. Chub are in season during the fall and winter months—the latter the best. They are not much esteemed as food, being as a general thing watery, tasteless, and bony; but occasionally the *chub of New York* in the mid-winter season is juicy and sweet. The best way to cook it is to boil with the scales on; or if it is large enough, stuff and roast. It is apt to turn yellow in boiling. A good chowder may also be made of it. (*See* CHOWDER.)

CHURNING. (*See* BUTTER.)

CIDER.—A fermented liquor prepared from the juice of apples; although it is not usually reckoned among the wines, yet it belongs to that class of beverages as much as those made from currants, gooseberries, or other fruits. The apples from which cider is made should not be permitted to fall on the ground; they ought to be hand-picked, or, if shaken from the tree, coarse cloths or straw should be placed under it. All prematurely ripe and unsound apples should be rejected. If the weather is fine, the fruit may be exposed in the open air, if not, it should be placed in sheds or lofts, until it is thoroughly ripe. The usual way of making cider is to pound or grind the apples to a pulp or pomace; this pulp is then placed in a properly constructed press and the juice pressed out. The juice should then be put into barrels, and then into a cellar where the temperature will not fall below 60° nor rise above 75°. An active fermentation will commence in a few hours, which should be permitted to continue with the bung open until the hissing sound, so readily discernible where carbonic acid gas is escaping, ceases. The cider should then be drawn off into clean barrels, separating it from its sediment; these should be bunged up for a few days, then opened, and the fermentation allowed to begin again. This second fermentation will be of short duration. The cider should now be racked; the bungs must be tightly closed; and if intended for draught use it should be kept in a cool cellar. If it is intended for bottling, it should be bottled early in the spring; this prevents an undue fermentation, and secures a proper degree of life in the bottle.

Cider is fit for drinking as soon as fermentation ceases, but it reaches perfection at the end of two years. In bottles it can be kept twenty or thirty years without spoiling, unless the cork decays. Cider is not so nutritious as beer or ale, but it is a very agreeable and mildly stimulating drink in hot weather—its acids assisting materially in quenching thirst; and it is recommended as an antiseptic in cases of low fever.

It is said that natural cider will not keep if removed in cask after it has been made, and in order to fortify it to bear transportation, it is necessary to add sugar. This so far injures it that it may renew fermentation; but it temporarily masks the acid flavor, and makes the

fluid more agreeable to the palate of those not accustomed to its use. "Newark cider" is the best that can be obtained in New York stores, and there is no better anywhere.

CIDER, Mulled. (*See* MULLED CIDER.)

CINNAMON.—The inner bark of the cinnamon tree which grows extensively in China, Ceylon, and the East generally, and is also cultivated in the West Indies and South America. The best comes from Ceylon, where the largest quantity grows. Some of the Chinese is very good, but inferior to that from Ceylon; the Cayenne is thicker, but not so good; that from Brazil is the worst. Cinnamon is the most agreeable of the spices; its odor is very fragrant, and its taste highly aromatic, hot, but not too pungent to be pleasant on the tongue, and without any bitterness. The best is scarcely thicker than paper, and in long pieces, of a light yellow color, a dark color being a mark of inferiority. It is safest to buy it in sticks, for, when ground, it is generally adulterated with cassia (which is sometimes substituted for it), and with baked wheat flour, sago meal, or arrow-root.

An essential oil is made from the inferior qualities of cinnamon which is often much used in perfumery, medicine, and as a substitute for the spice.

CIRCULARS.—The measures required for the circular are: 1, the length desired for the garment; 2, the size of neck (XV.).* The paper taken for the pattern should be four inches longer than the measure, and should form a square of these dimensions. This square should now be folded diagonally, in halves, which gives us a triangle. Next, fold this triangle in halves, and we have a smaller triangle (Fig. 1),

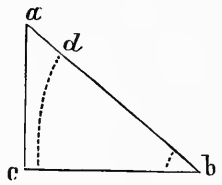


Fig 1.

the side *a*, *d*, *b* being open. Cut as represented by the dotted lines, *b* indicating the neck, which should be cut out but little, leaving room to cut it more accurately after the pattern is opened and put together. Now unfold the paper, and we have half of the circular, the half being in two pieces and requiring to be pasted together. The fulness of the circular may be diminished at pleasure by cutting off a strip from the front or the back, as is indicated by the dotted line in the back in Fig. 2, and the inner line parallel to the front. In cutting the garment, the material should be folded double, the line of the back laid upon the fold. The circular will thus be cut out whole, but if it be very long, the material will not be wide enough, and will require piecing on the corners of the front.

*For explanation of Roman numerals, *see* CUTTING and FITTING.

By modifying the circular we obtain the *talma*, which is cut in the following way: The pattern remains the same, but instead of the line of the back lying the straight way of the cloth, either we fold the cloth bias and lay the pattern on it, thus cutting it bias in the back but without a seam; or, leaving the cloth folded as for the circular, we move the pattern along at the lower edge, leaving the neck at the same place where it was, until the line of the back lies upon the bias, and thus cut the garment with a seam in the back. Also the talma has a seam taken up on the shoulder. (Fig. 2, *a*.) By prolonging this seam down the

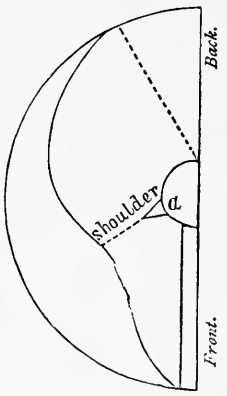


Fig 2.

dotted line, we represent the fronts separate from the back. Thus the talma may be cut in four ways, that is to say, it may be whole; it may have a seam in the back and thus be in two pieces; it may have seams in the shoulders and none in the back, thus being in three pieces; or, it may have seams in the shoulders and a seam in the back, thus being in four pieces. Which of these four ways is preferable will depend on the width of the material to be used. The inside line of the edge (Fig. 2) represents the favorite shape of this garment, although it may assume any other contour desired.

In connection with the circular we have usually a hood, especially where the garment is made of waterproof. We shall therefore explain the two forms of hood in general use.

For the first, a little circular is to be cut, according to the rule given above, five or six inches deeper than the desired length of the hood. This edge will then be turned up, and a tape stitched along the inner side to admit a drawing-string or an elastic, an inch being left above the tape, to make a sort of ruffle when the elastic is drawn up.

The second shape of hood is made in two pieces, the border being cut out as a facing and applied externally. The hood itself will be cut after the pattern of the cape (*see* CAPE), and the border cut by the hood, making the border deeper in the back than in front. These hoods may be cut of any length,

and are very stylish made long and narrow in the back, pointed, and trimmed with heavy cord and tassels.

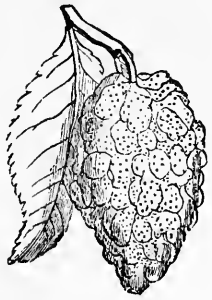
In using either of these shapes of hood, a lining may be employed, which may be quilted and wadded if desired; by using bright-colored silk for the lining, a very pretty effect is produced, especially where the garment is made for a child.

From the circular pattern may be cut a very simple form of dressing-gown, to be made in some cotton material or in flannel. It requires no lining, except over the shoulders. Having cut the circular of sufficient length to touch the floor, or longer in the back if desired, do not reduce the fulness of the circular at all in the front or back, but make a seam on the shoulder as in the pattern for the talma (Fig. 2). Let the seam be as long as the shoulder length, (XIV.), and cut out the arm-size at the end of this seam in accordance with the measure (IX.). Cut the sleeve after the pattern (*see* DRESS), and put it in, using a heavy cord to strengthen the arm-size. Add to the wrapper a square collar, and pockets stitched on to the front breadths; the collar, cuffs, and pockets having some simple trimming. Fasten the garment with buttons from the neck to the bottom of the dress (a dozen good-sized ones will be sufficient), and confine it at the waist with a leather belt if the material be cotton, or cord and tassels, if it be flannel.

CISTERN.—A reservoir for water, which it is sometimes necessary to construct in houses where there is no public supply of water. When sunk in the ground, cisterns differ from wells in receiving their water by artificial channels, and not natural springs. In dry localities, where the supply of other water is uncertain, they frequently take the place of wells, being constructed of large size, and connecting with numerous channels for collecting the rain water that falls upon the surrounding surface. Cisterns are usually built of brick, but a cheaper method is to dig a hole in the ground of the required size, and plaster it with hydraulic cement directly upon the walls. Sand and gravel thus cemented over stand perfectly well, and make durable sides and bottom to the cistern. Indoor cisterns should be made of strong slate with a perfectly smooth surface; and as slate is liable to be broken by a heavy blow, it is advisable to have it in a wooden casing or at least provided with a front of wood. Every cistern should also have an *over-flow waste-pipe*, which is a pipe fixed either at the side or perpendicularly in the bottom with the opening at the level which the water would be when the cistern is sufficiently full. If by any accident the ball-cock should be out of order, or if there is no ball-cock, the superfluous water that would otherwise overflow will pass down this waste-pipe. It is also desirable to have a filter attached, and all water for drinking should be filtered. A serviceable filter can easily be made with merely a small sponge and a little broken charcoal. (*See* WATER.)

CITRIC ACID.—(*See* ACIDS.)

CITRON.—A fruit of a low evergreen tree, of the same species as the lemon; larger and



Citron.

less succulent, but more acid. Its juice is a good substitute for lemon juice. The rind is best known in this country. The choicest comes from Leghorn and Nice.

CIVET.—A substance taken from the civet cat, and having a perfume similar to that of musk and ambergris. It comes chiefly from the East and Africa. Its consistence is like that of honey, and for this reason it is very liable to adulteration by honey. Civet was formerly esteemed very highly as a stimulant and antispasmodic medicine; but castor and musk, also animal secretions, have taken its place, and it is now used only for perfuming the more fragrant soaps.

CLABBER.—Also called "bonny-clabber;" milk that has become thick and nearly solid in the process of souring. If it stands too long after forming, it decomposes and runs off into whey; but if taken while fresh, covered with cream, and sprinkled with sugar, it is delicious, and said to be one of the most digestible forms in which milk can be taken.

CLAMS.—There are several varieties, but only two, the *hard-shell* (or quahaug) and the *soft-shell*, are often met with in our markets. The season for clams is from May to September. (*See* SOUPS.)

Boiled Clams. — Select thin-edged ones. Wash them carefully and put them into a pot, over a hot fire, with very little water, so as to save their juices; when they open, leave the juice in the pot, take the clams from their shells and put them in; add butter, pepper, and a very little salt, and boil them ten minutes. Remove and serve hot.

Broiled Clams. — Take large, long clams; treat like oysters (which *see*).

Broth (Clam).—This is excellent for invalids, being the best food known for giving tone to a deranged stomach; it may even be given in small quantities to sick children over six months old. Select small clams; break the shells, and put the clams with the juice into a small boiler or stew-pan; add enough water to modify the salty taste, and boil for ten minutes. Strain, and it is ready for use.

Chowder (Clam) (*See* CHOWDER.)

Fritters (Clam).—Mince a dozen clams fine. To the juice add one pint of milk, three eggs well beaten, and flour enough to make a thin batter; season with pepper and salt, stir in the minced clams, and fry quickly in hot lard. Unless the fritters are fried quickly they will be too greasy. Instead of mincing the clams, they can be dipped whole in the batter, and fried as above.

Pickled Clams.—This is the form in which clams are sent to the interior, or prepared to be eaten raw. They can be pickled for domestic use in the same way as oysters. (*See* OYSTERS.)

Roast Clams.—1. Put them in a pan over a hot fire; when they open, empty the juice into a sauce-pan; and add the clams; add some butter, and season with pepper and very little salt. Leave on the fire three minutes, and then serve.

2. To roast them after the fashion of "clam bakes," place them on a stone, edge downwards, and cover over lightly with dry brush and sage. Set the brush on fire, and when it is a little more than half burnt, pull out some of the clams and try them, and, if done, brush away the fire and cinders. Remove the clams from their shells, and season with catsup, butler, and spices to taste.

CLARET.—All those wines which are know to us as *claret* are the product of the country around Bordeaux; but in France there is no wine known as claret, which is simply a corruption of *clariet*, a term applied there to any red or rose-colored wine. The genuine wines of Bordeaux are of great variety, that being one of the most famous wine districts of France, and a number of them are of the first quality. The principal vineyards are those of Medoc, Palus, Graves, and Blanche, the produce of each being different in character. The red Medoc wines are the best, and are known as *Latour*, *Lafitte*, *Chateau Margaux*, etc. When in perfection, they are of a rich red color, have a most agreeable bouquet, and are strong without being intoxicating. The *Lafitte* is considered to have the finest flavor; the *Chateau Margaux* is next in rank; the *Latour* is the strongest, and has the fullest body, but lacks the softness of the others. Besides these there are vast quantities of second and third rate Medoc wines, which seldom find their way out of France in a pure state. All the Medoc wines are improved by a sea voyage.

The wines of *Graves* are so called from the gravelly soil on which they are produced; they are both red and white, but the latter is most celebrated. Some of the red resemble Burgundy in flavor, but are inferior to good Medoc wines.

Another class of white Bordeaux wines well known in this country are *Barsac*, *Sauterne* and *Beaume*, which have the advantage of keeping long and having considerable dryness.

The *Palus* wines are inferior to the Medoc and Graves. They are strong and rough when new, and are often used to mix with Medoc wines to give them additional strength and body; when old, some of them have a fine bouquet.

The Bordeaux wines, when genuine, are among the best that France produces; but they seldom reach us in a pure state. The inferior are mixed with the better kind for exportation; and very often they are adulterated with the cheap Spanish wines of Alicant, or with brandy.

Claret should usually be drunk a little warmer than the temperature of the room, but in warm weather is good iced. The highest grades of claret will keep for from fifteen to eighteen years, constantly improving in delicacy. After that time they rapidly deteriorate.

Claret Cup.—A few sprigs of balm, a slice or two of cucumber; pour over them one pint of sherry, half a pint of brandy, a lump or so of oleo-saccharum and the strained juice of one lemon and three oranges, half pint of curaçoa, one gill of raspberry syrup, three bottles of plain soda and three bottles of claret. Sweeten to taste, draw the herbing and serve. This is the quantity for twenty people.

Claret Cup.—II. Peel one lemon fine, cover with pounded sugar, pour over a glass of sherry; add one bottle of claret, sprig of verbena and bottle of soda water.

Cooling Cup.—Half fill a punch bowl with slices of pine-apple (the rind cut therefrom) and lemon cut very thin; arrange in alternate layers, each layer being thickly strewed with white granulated sugar. Pour over the fruit as much claret as will fill the bowl; cover closely, and let it stand six hours. Then put in a piece of ice; when cold add a bottle of plain soda water.

Claret Punch. (*See* MULLED DRINKS.)

CLAY. (*See* BRICKS.)

CLEANING.—Wherever directions for cleaning come most conveniently under the special articles, they will be found there. (*See* BRASS, CARPETS, FEATHERS, INK STAINS, MATTING, MARBLE, OIL-CLOTHS, SILVERWARE, STOVES, GREASE, STAINS, etc., etc.) We confine ourselves here to such things as are not mentioned elsewhere, or are mentioned in such connection as to render it desirable to bring instructions for cleaning them together under this head.

Alabaster. (*To clean.*)—Spots of grease may be first removed by a cloth dipped in spirits of turpentine; then immerse the article in water, rub it with a painter's brush, and dry it; and finish by rubbing it with a soft brush dipped in finely powdered plaster of Paris.

Bottles. (*To clean.*)—Bottles should always be scalded, but care must be taken not to put them too suddenly into hot water. If not very dirty they may be washed in simple soap-suds, and afterwards rinsed out in pure water; but if they are very dirty or smell badly, a little soda or oxalic acid should be put in each one.

If there is any substance which water alone will not remove, pour in a few bird-shot with the water and shake them around. Bottles that have had medicine in them may be cleaned by putting ashes and water in each, immersing them in cold water, and then heating the water gradually until it boils. When they have boiled an hour, take from the fire, and let them remain in the water till cold; then wash in soap suds, and rinse in clear water.

Brushes. (*To clean.*)—Hair brushes should be washed in soda and warm water, or ammonia and cold water, dipping the bristles frequently downward into the water, but keeping the backs as dry as possible; when the bristles look clean, rinse the brush in cold water, shake it without wiping the bristles, and set it in the air to dry. Soap softens bristles.

Carriages. (*To clean.*)—Remove cushions and carpets and clean with wisp broom. Dust the carriage with feather duster. Go over dirt to *moisten well* with a hose (regulating stream with thumb rather than using a nozzle), or, in default of this, a "watering-pot." Wash the body with a sponge and *plenty* of water keeping the sponge free from dirt. Never rub any part—rather "wash." Wash the wheels with a different sponge and lots of water, the more the better. Prop your wheel so as to turn it, going over each spoke separately. After removing the dirt, wipe lightly with moist chamois. Clean the silver with "whitening" or "lamp-black." Remove the wheels and wipe the axles and boxes *thoroughly* and apply a little sweet oil to the axle twice a week at least. *Never* use warm water on a carriage.

Combs. (*To clean.*)—Clean combs with brushes; washing makes the teeth split and the material rough. Clean fine tooth combs by throwing strands of thread over a hook, drawing tight, and inserting between all the teeth.

Earthen-ware. (*To clean.*)—Scald and wash it out thoroughly with ashes and a cloth. If there is any smell in jars let them stand filled with water and a little soda.

Gilding. (*To clean.*)—Gently wipe with cotton dipped in sweet oil; linen should never be used, as it deadens the gilding. To prevent flies from staining gilding, simply wash it over at the beginning of Summer with water in which two or three onions have been boiled.

Gloves (Kid). (*To clean.*)—Benzine is the best thing. Pour some of it into a wash-basin, put on the gloves and wash, as in washing hands. *Do not have a light or fire in the room for fear of explosion.* Magnesia, moist bread, or India-rubber are all good for light kid gloves: rub on thoroughly, the magnesia dry, with a light flannel. If dirty enough to need dyeing, sew up the tops of the gloves, and rub them over with a sponge dipped in a decoction of saffron and water. (*See* DYEING.)

Harness. (*To clean.*)—Have a large hook covered with leather, and padded, suspended from the ceiling. Upon this hang the harness. With a sponge, wrung out and *well* rubbed with castile soap, wipe well *all over* until clean. Pull the straps from the loops and buckles, occasionally in washing, to keep *all* parts neat. Now wipe the patent leather parts—previously treated as above—with a moist chamois, and then polish with a clean, soft dry one. Never wet this second chamois. Now and then put a little sweet oil on the patent leather. If the harness is covered with mud, wash with a sponge in clear water *first*, and then proceed as above. If exposed to much rainy weather, a little neats-foot oil may be applied once in a month or two: ordinarily, once in six months will suffice. Silver mounting will continue in good order by rubbing with the dry chamois after washing—if needed, "whitening" may be used. Gold mounting requires simple wiping with the chamois. Prince's metal and brass require cleaning with "rotten-stone" or some of the preparations found at the saddler's. Steel bits are the handsomest and are easily kept bright if wiped *as soon as removed* from the horse: if rusted rub with fine sand, moistened with water. A little sweet oil will prevent their rusting while not in use.

Most of the varnishes and patent blackings are injurious to the leather. A little "liquid black" from the dyer's will be all-sufficient for rubbed spots, and castile soap for polish.

Hearths. (*To clean.*)—Wash free-stone hearths in water without soap; while damp, rub on free-stone that has been reduced to a powder; let it remain till dry and then rub it off. If the hearth is stained, rub it hard with a piece of free-stone; if you wish it to look dark, rub it over with hot soft soap, alone or diluted with water. For brick hearths, apply redding (or red clay) mixed with thin hot starch and a little milk.

House-Cleaning.—Most of the advice on this subject is already included elsewhere in this article, and under FLOORS, GREASE, MARBLE, PAINT, STAINS. It is worth while to add, however, that to walls painted in distemper, or simply whitewashed, water cannot be applied, and they can only be brushed carefully. Kalsomined walls can be lightly and quickly wiped with damp cloths.

Knives. (*To clean.*)—The handles of knives, especially if of ivory or horn, should never be dipped in hot water. The blades should be cleaned by rubbing vigorously with a soft flannel and Bath brick. If rusty or deeply stained, use wood ashes rubbed on with a newly cut Irish potato; this will remove spots when nothing else will. If the ivory handles become yellow they may be rubbed with fine sand-paper.

Marble Steps.—Scrub with sand and water, with the hearth-stone, or with this mixture:—Boil half a pint of size with the same quantity of whiting and of pipe clay, in two quarts of water; the stones must be first washed clean with water, and this mixture afterwards laid smoothly on with a cloth; when dry, they must be rubbed with a dry cloth or flannel.

Mirrors. (*To clean.*)—Mirrors and looking-

glasses may be washed with a soft sponge dipped in spirits of wine (or water with a little ammonia in it), no more of the glass being wet at once than can be immediately wiped off, as dampness, in altering the temperature of the glass, unsettles the coating at the back which gives it its power of reflecting objects. While wet, the glass should be dusted with powdered blue or whiting tied up in a muslin bag, and then rubbed off with a soft linen duster or silk handkerchief or pieces of chamois-skin.

Paint. (*To clean.*)—Soap should never be put on paint. For ordinary cleaning scour the paint with a brush less hard than that used for floors, using warm water; before it dries wash it off with a piece of old flannel dipped in clear cold water, and wipe dry with a linen cloth. If the paint is very much soiled, smear a piece of flannel in whiting, mixed to the consistency of paste in warm water; rub the surface to be cleaned briskly, and wash off with cold water. Grease spots will in this way be almost instantly removed as well as other dirt, and without injuring the paint.

Paper-hangings. (*To clean.*)—Brush all the dust off carefully with a brush and rub the walls with thick slices of stale bread, beginning at the top of the room, care must be taken not to rub the paper too hard, and to rub downwards with a perpendicular stroke; if the rubbing is horizontal the wall will be covered with smears. The dirty surface of the bread must be cut away from time to time, and the pieces renewed as often as necessary. There is no way of removing grease spots or other stains from wall paper.

Papier-maché. (*To clean.*)—Papier maché articles should be washed with a sponge and cold water, without soap, lightly dredged with flour while damp, and polished with flannel.

Pots, Kettles, etc. (*To clean.*)—As soon as a pot or frying-pan has been emptied of what was cooked in it, it should be filled with hot water and set back upon the fire to scald thoroughly. After cleaning, it should be wiped dry before being set away into the closet or it is likely to rust. If grease or any substance gets caked in it so as to resist the action of water, it may be dissolved by a little pearlash. Copper utensils should be cleaned with brick-dust and flannel; if the outsides are to be highly polished, use a composition of one ounce of spirits of hartshorn, half a pint of vinegar, one ounce of rotten-stone, and one ounce of soft soap; mix the soap and rotten-stone together first, and then add the hartshorn and vinegar. Tins should be kept clean by rubbing them with sifted wood-ashes, or whiting, or Bath brick.

The "chain-cloth," a net work of steel rings, resembling an old fashioned reticule is of great service in cleaning kettles that have been badly burned.

Shawls. (*To clean.*)—Either woollen or silk shawls may be cleaned very thoroughly in this way: Pare and grate raw and mealy potatoes and for each pint of potato-pulp add two quarts of cold water. Let it stand five hours, then strain the water through a sieve and rub as much of the potato pulp through as possible; let the strained water stand to settle again, and when clear turn the water off from the dregs carefully. Put a clean white sheet on a perfectly clean table, lay over it the shawl to be cleaned and pin it down tightly. Dip a sponge that has never been used into the potato water, and rub the shawl with it until clean; then rinse the shawl in clear water and salt (a teacupful of salt to a pailful of the water). Spread it on a clean, level place where it will dry quickly,—if hung up to dry the colors are apt to run and leave the shawl streaked. Fold it up while damp, and let it remain half an hour; then wrap it in a clean white cloth, and put it under a heavy weight until it is dry. If there are any grease spots on the shawl, they should be extracted before it is washed.

Windows. (*To clean.*)—Wash each pane separately with old flannel and warm water, but do not let the water run on the sash. Dry quickly with a soft, clean linen cloth, wiping the corners carefully; polish with dry chamois skin, or newspapers rubbed soft between the hands. If the glass is very dim with dirt or smoke, dissolve a little washing-soda in the water; or use whiting mixed smoothly in some water. The addition of a little *gin* to the water is also a great improvement. Paint or putty may be removed from the glass by dissolving sufficient pearl-ash in hot water to make it very strong; then saturate the spots with it, let it remain till nearly dry, and then rub it off hard with a woollen cloth. Whiting may be used on the spots if they are very obstinate.

CLOCK.—Clocks are so cheap now, that their usefulness and companionableness should secure them a place in nearly every room in the house. There should always be one in the kitchen especially, or where the cook may easily consult it; much of the careless and unscientific cooking which disgraces American kitchens is owing to the habit that prevails there of guessing at the time. The whole art of keeping clocks in order—so far at least as they can be kept in order by one not acquainted with their construction — consists in winding them up regularly and properly. If once the mechanism becomes disarranged and they refuse to keep time, it is best not to tinker with them, but take them at once to a clockmaker. If the ordinary pendulum clock runs too slow, this may be remedied by screwing the little nut at the base of the pendulum a little higher; if it runs too fast the pendulum should be lowered slightly. A clock that is driven by weights must be so placed that its sides will be exactly perpendicular.

CLOTHING.—It is foreign to our purpose to enter here into the history of dress or a description of prevailing fashions; the forms of dress, being subject to the arbitrary rule of fashion, are seldom permitted to be regulated by individual feeling of convenience or utility,

and this branch of the subject has by common consent been handed over to the milliners, dressmakers, and tailors. There are, however, certain physical principles respecting clothing that are permanent and universal, and attention to these will ensure healthy dress, notwithstanding the eccentricities of form and fashion.

The usual temperature of the body is about 98°; and its heat is constantly being thrown off into the surrounding air. Clothing checks or prevents this loss in some degree: and it follows of course that the materials which are the best non-conductors form the warmest clothing. But there are several other circumstances to be taken into consideration in choosing materials. The skin, by its structure, performs the function of regulating the temperature — by perspiration through its pores the excess of heat is carried off; hence when this function is deranged, and the insensible perspiration obstructed, disease is the consequence. In addition to this service, the pores of the skin serve as an outlet for matters no longer necessary in the animal economy, and which if retained would prove injurious; and we may observe that the skin is abundantly supplied with minute nerves, which are the source of feeling, and which require a certain degree of warmth to preserve their vital action. From these facts it is easy to learn that clothing should be of such a nature as not to impede the escape of the perspired matter but to let it pass through its texture; that it should be of such non-conducting quality as to confine the heat generated by the blood sufficiently to preserve the activity of the nervous system; and that by its lightness, softness, and pliancy, it should permit the free action of the limbs.

Applying these principles, it is plain that clothing for summer wear should be made of materials which conduct heat rapidly; while that for winter should be made of such as conduct heat slowly. Now the power of conduction of all substances available for clothing depends largely on the capacity for holding air; those which hold most of this worst of all conductors of heat become, in consequence, bad conductors themselves, and those which hold least are necessarily good ones. Thick and loose textures are obviously better holders of air than thin and closely-woven ones, and therefore woollen clothing will keep in the bodily heat and feel warmer than that made of linen. The capacity of dress for holding air will also, it is clear, be increased by numerous layers and looseness of fit; while it will be diminished by tightness; it is obvious then that warmth will be best secured by clothes which fit loosely and are composed of successive layers. Moisture increases the conducting power of clothing, because it fills up the interstices of the material and thus excludes the air. Wool absorbs moisture less rapidly than linen or cotton or any other material, and its conducting power is very little increased by it. For all these reasons woollen clothing, next the skin especially, is better than any other, no matter what may be the season of the year; and it may be so adjusted as to meet the requirements of both winter and summer.

Linen is the best conductor of heat of all the materials used for clothing, and as it does not absorb so much of the perspired matter as wool, it leaves the pores of the skin partially clogged up. It also feels colder to the skin than wool, and robs the body of heat very rapidly when first put on. It is a step therefore in the direction of health as well as economy that it has been nearly superseded by cotton in some of the most important articles of dress. Cotton, in its powers of conducting heat, holds a middle ground between linen and flannel, and should be used when the latter is inappropriate.

The choice of colors in dress, though generally a matter of fashion or mere caprice, is only less important than choice of materials. Of all colors black reflects least and absorbs most of the heat that strikes upon it, which warmth it communicates to the body; but, on the other hand, it radiates more than any other color, and of course gives out more of the heat which it receives from the skin, producing a counteracting effect. White, on the contrary, is least warmed by external heat but is more effectual in confining the heat of the body. The difference between them with respect to warmth is that black clothes are hottest when the sun is most powerful, and white warmest when the sun has least power; speaking generally, white is coolest in summer and black in winter. The inference from this is that for steady wear, white is most appropriate for underclothes, while the best color for outside apparel is a neutral tint such as gray or brown.

We hope it is superfluous to urge the necessity of frequent change of clothing; but it should be borne in mind that continuous wear of the same apparel is not only uncleanly but detrimental to health. That which is worn next the skin, no matter what its texture is, should be frequently washed, and the outer garments should be changed from time to time to admit of a lengthened purification by shaking and exposure to air. Frequent cleansing of a garment, apart from its propriety, has the effect of keeping the material open and soft and pervious to the air, which, as has been shown, is essential to maintaining the warmth of the body. The open fleecy texture of woollen cloth especially, if not often stirred by shaking, beating, or brushing, will become so pressed and matted by constant use as to lose many of its peculiar advantages. A most healthy and cleanly practice is to shake each article of apparel every morning just before it is put on the body.

One point in which people generally are much too careless is in making the changes of underclothing that are considered necessary for the different seasons. Too great haste in making this change, especially in the spring, has been and is one of the most fruitful sources

of coughs, colds, and the related diseases. Such a change should never be made, until the weather is entirely settled, in other words, until steady hot weather has come in. The practice too often indulged in by young girls of changing about from day to day as the weather happens to vary is reckless to the point of foolishness.

To Render Non-Inflammable.—Linen and cotton goods may be rendered non-inflammable by steeping them in a solution of sulphate of ammonia (seven parts to one hundred parts of water), or tungstate of soda (twenty parts to one hundred of water), and then drying them. Tungstate of soda is the best on account of its not interfering in any way with the process of ironing. Clothing prepared in this manner may be held in the flame of a candle, or gas, or lamp, without taking fire; that portion of the stuff in direct contact with the fire becomes charred and is destroyed, but it does not ignite, and consequently the burning does not spread to the rest of the material.

To Render Waterproof.—Into a gallon of water put a quarter of an ounce of yellow soap, and let it boil for half an hour, skim, and when cold put in the cloth or garment; let it remain in soak for twenty-four hours. Take it out and hang it to drain, and when half dry put it into the following solution: half a pound of alum, and a quarter of a pound of sugar of lead, dissolved in three gallons of water. Let it soak about four hours, and then hang to dry without wringing. The solution does not alter the appearance or texture of the article immersed; and the process does not require to be repeated.

For directions for making *Women's and Children's Clothing and undergarments*, *see* CUTTING, and FITTING, and under the names of the respective garments.

CLOTHES WRINGER. (*See* WRINGER.)

CLOVES.—Every part of the clove-tree abounds in aromatic oil, but it is most fragrant and plentiful in the unexpanded flower-buds, which in a dried state, form the cloves of commerce. Cloves grow in several parts of the tropical world, but the best come from the East Indies. In choosing select those of a lightish brown which are not shrivelled. The oil of cloves may be obtained by expression from the fresh flower-buds, but the usual method of obtaining it is by distillation. Few essential oils have a more extensive use in perfumery than that of cloves. It combines well with grease, soap, and spirit, and forms a leading feature in some of the most popular handkerchief essences. For essence of cloves, dissolve oil of cloves in the proportion of 2 oz of oil to 1 gal. spirit.

COAGULATION.—The thickening of a substance that has been fluid, as the formation of curd from milk when rennet is boiled with it or when it has clabbered.

COAL. (*See* ANTHRACITE, BITUMINOUS COAL, CANNEL COAL, and CHARCOAL.)

COBBLER. (**Fruit.**)—Take half a glassful of the juice of any fruit; sweeten to taste, and fill up the glass with ice broken very fine.

Sherry Cobbler.—Fill a large glass full of ice broken up fine; fill the interstices with sherry, add a tablespoonful of powdered white sugar, and about a square inch of lemon peel that has had the oil pressed to the surface. Stir together thoroughly, and drink through a tube or a straw.

COCHINEAL.—The product of the cochineal insect (*Coccus Cacti*), a native of Brazil, whence it is shipped in large quantities to all parts of the world. It is used in dyeing scarlet, crimson, and related colors, and is the substance from which *carmine* is made. (*See* CARMINE, and DYEING.)

COCKLE.—A kind of shell-fish very abundant and highly thought of in Europe, but scarce in this country and seldom seen in our markets. It is shaped like the clam, but wrinkled and rough; and is generally picked up with the round clam in the mouths of rivers and bays near the ocean. They have a peculiar and agreeable flavor, and are regarded as a very wholesome food; they may be eaten raw, boiled, or fried, and are very good used as sauce instead of oysters. If pickled like mussels they will keep for several days.

COCKROACHES.—These are one of the worst of the insect pests. They may be destroyed by pouring boiling water into their haunts, or setting a mixture of arsenic mixed with molasses and Indian meal round the places which they frequent. Chloride of lime and sweetened water will also poison them; as will hellebore rubbed over with molasses. Cockroaches must be dealt with promptly, as they multiply rapidly and soon overrun the house. (*See* ROACHES.)

COCKTAIL. (*See* under WHISKEY.)

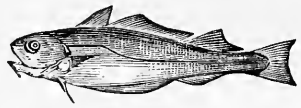
COCOA.—Cocoa is generally purer than chocolate, which is a preparation of the same bean, and is also more nutritious. The best comes from Trinidad, and may be had in the original seed or nibs, *flaked*, or ground and prepared like chocolate in small square packets. The latter is a mixture of cocoa and arrowroot. The surest way of getting cocoa pure is to buy the beans and roast them, afterwards grinding them like coffee or simply bruising them. It deteriorates by keeping, and it is best to buy it in small quantities at a time.

When prepared cocoa is used, make it in the same way as chocolate. (*See* CHOCOLATE.) When the cocoa nibs are prepared add two ounces of them to a quart of boiling water, and boil an hour and a half; then add a quart of fresh milk, let it heat almost to boiling, and then remove from the fire and serve.

COCOANUT.—The fruit of the cocoa palm which grows wild throughout the tropics and is especially abundant in the eastern parts of Asia and the islands of the Indian seas. Those in our markets are generally brought from Baracoa and Brazil. Besides the white, solid kernel which is used so extensively for pies, puddings, cakes and the like, cocoanuts contain a creamy liquid, called milk; in buying

select those in which the milk can be heard when they are shaken. Cocoanut should be grated fine before using.

COD.—This fish is found in all the northern parts of the world and especially on the banks of Newfoundland, Cape Breton, and New England.



It may be had in our markets throughout the year; from October to May alive, after this they come packed in ice, from the northern fisheries. There often appear codfish of various colors or markings; some full of streaks, light and dark, many of the usual gray color, others of a greenish gray, and others still of a reddish brown. The fishermen say this is caused by their being taken in different waters, and apply to them the names of *rock-cod*, *shoal-cod*, etc. When fresh, the flesh is white and firm, the neck is thick, the gills red, and the eyes bright. The tongue is cut out when the fish is first caught; and these, with the air bladder or sack, called *sounds* are cured and found on sale. They are highly nutritious, being almost pure gelatine.

Balls (Codfish).—*Take:*—codfish, picked, ½ pt.; milk ¾ cupful; cornstarch 2 even tablespoonfuls; butter ½ the size of an egg; eggs 3; potatoes 10 or 11, medium sized. Soak the fish all night (if very salt in a great deal of water) then press the water from it and pick it very fine; boil and mash the potatoes; add the butter and the milk, in which the corn-starch is mixed, to the hot potato, throw in the fish with the eggs and beat the whole until so light that it looks like pound-cake. Fry in balls, in deep lard, or brown like muffins in rings on the griddle.

Boiled. (Fresh.)—Soak it for half an hour in cold water, slightly salted; then drain it and wipe dry. Put it into a pot with water enough to fairly cover it, add a little salt, and boil for half an hour or more according to the size of the fish. Dish, and garnish with scraped horse-radish, or parsley, or both; surround with slices of fried roe, and accompany with oyster sauce. Another nice dressing is with egg sauce poured over it on the dish; garnish with slices of hard-boiled eggs and sprigs of parsley. Boiled cod is also eaten with Anchovy, Caper, or Dutch sauce.

Boiled. (Salt.)—Soak it in cold water for two days, changing the water two or three times; then scale it well and clean. A shorter way is to place it one night in lukewarm water, renewing the latter several times; it is then ready for use next day. Lay the fish in a kettle, cover it with cold water, set it on a slow fire, let it boil about two minutes; then take the kettle from the fire, cover it over tightly, and let it stand ten minutes. Drain the fish, dish it, and serve as above.

Chowder. (Codfish.) — Cut a codfish of six or seven pounds into slices about an inch thick; slice half a dozen medium-sized potatoes; cut one pound of salt pork into thin slices and fry them brown. Grease the bottom of the pot and put in a layer of the fish, then a layer of the potatoes and pork, with some pilot-bread or crackers; and so on, alternately, till all is in the pot. Pour over the whole a quart of water and a pint of milk, add salt and pepper to taste, and a few onions if they are liked, and boil twenty minutes.

Picked-up Codfish.—Pick the fish into small pieces, the smaller the better. Freshen by leaving it in water an hour; pour off the water, fill up with fresh, and set over the fire until it just comes to a boil; then pour the water off, and put on the fish just enough hot water to cover it; add, to a quart of the soaked fish, a level tablespoonful of butter, a tablespoonful of flour, and a dust of black pepper. Let it boil ten minutes, and when it has been taken off the fire thicken by stirring in two well-beaten eggs. Dish and serve hot.

Remnants of Codfish.—Remnants of fish left over make a pretty and agreeable dish prepared thus: Pick the flakes of fish away from the bones and skin before they become cold. When wanted put them into a stew-pan with what was left of the sauce (anchovy, oyster, or other) with which they were originally served. Add a dozen or more fresh oysters with their juice; if these are not enough to moisten the fish (and it only requires to be just moistened), make up the deficiency with a spoonful or two of melted butter. Warm carefully over a slow fire, and when once hot through take it off. Surround the rim of the dish with a wall of nice mashed potatoes, so as to leave a hollow in the middle; in this hollow place the warmed-up fish with its sauce. Sprinkle over the fish grated bread-crumbs or crackers; set the whole for a few minutes in a quick oven; and when nicely browned on the top, serve.

Stewed, with Eggs.—Prepare the fish as for balls. Take a pint of fresh milk, heat it almost to boiling, stir into it gradually three eggs well beaten, a tablespoonful of butter, a little chopped parsley, a little pepper, and lastly the fish. Boil it up once, turn it into a deep covered dish, and serve hot. This is an excellent dish for either breakfast or supper.

Tongues and Sounds.—Soak them twenty-four hours, changing the water once; then throw them into boiling water and boil ten minutes. Serve, covered with egg sauce and garnished with toast.

2. Boil as above, and let them cool. Then dip them in batter, or roll them in bread-crumbs and egg, and fry to a crisp brown. So treated they either make a nice dish by themselves, or are an appropriate garnish for both salt and fresh cod boiled.

3. After cooking them, scrape off the skin,

cut them into small pieces, and stew them in a little milk five or ten minutes till tender. Just before taking up, add a little butter and a little flour-paste. Serve with cold boiled eggs cut up over them.

CODEIA.—An alkaloid contained in opium. It possesses hypnotic properties but produces only moderate anodyne effects. It is used to produce sleep, or to quiet cough in persons who do not tolerate opium or morphia. The dose is from ¼ to 1 grain, in pill form, or dissolved in syrup. One dose only should be taken in one day without the doctor's advice.

CODLING.—This fish is also known as "hake." It appears to be a species of the codfish, but is not considered equal to the latter in flavor or in nutritive value. It weighs from one to twenty pounds, and is in season from September to December, though even then it is by no means abundant in our markets. It may be broiled or fried like blue-fish, or boiled like cod.

COD-LIVER OIL.—Several kinds of livers are employed to make this oil, but the cod yield it most abundantly. Its great virtue probably lies in its easy digestibility. Probably in those cases where it does so much good, it re-establishes the balance of nutrition, enabling other substances to be made use of in the animal economy which were before rejected. Under its use patients sometimes marvellously increase in weight and improve in general appearance, their blood becoming richer, and their complexion ruddier, even though they are taking no iron. Its use is thus indicated in a great variety of exhausting diseases, especially those where there is chronic wasting with gradual emaciation. Individuals, too, with swollen glands, which themselves interfere with nutrition, are almost invariably benefited by its use; and one of the most obstinate complaints known—chronic rheumatism and rheumatic gout—frequently yield to its influence. Where there is scrofula, and a tendency to consumption, cod-liver oil is invaluable; even in advanced pulmonary consumption its effects are wonderful. Nor is it of less value in treating the diseases of the bones and joints in scrofulous persons. In the wasting diseases of childhood, there is no remedy to be compared with cod-liver oil.

It is a common assertion on the part of patients that they cannot take the oil because it makes them sick. The first thing to be done under such circumstances is to secure the purest and most palatable oil possible; it should be perfectly clear, and have not the slightest trace of rancidity about it. Good oil has a slightly fishy smell, and taste, that is all. Then it should be given in small doses; let the patient begin with a tablespoonful, or even less, a few drops if no more can be tolerated. It may be given in anything the patient fancies, water, milk, orange wine, curacao, etc., and it is best given within half an hour after a meal; some like it immediately after. Even this may upset the stomach, and then it must be tried the last thing at night, after the patient has lain down in bed. As soon as the patient becomes accustomed to it, the dose must be gradually and carefully increased, taking care not to overload the stomach, until he can take a tablespoonful or more three or four times a day. When the stomach utterly rejects it, the oil is to be rubbed into the stomach and bowels with the hand or a warm flannel. This plan is especially adapted for children. In marasmus and other wasting diseases, when digestion is entirely suspended, a wide band of flannel dipped in warm cod-liver oil and bound round the bowels, renewing it as it dries, may save the child's life. The addition of a few drops of Sulphuric Ether to the oil, in some cases, renders its digestion possible.

COFFEE.—Coffee is said to be a native of Arabia, but it has spread from thence throughout the tropical portions of the world and parts of the temperate zone; it will grow in any climate where the temperature does not fall below 55°. The best coffee of commerce comes from Arabia, and is known as *Mocha*, the next best is the *Java*, and after that the *Ceylon*, *Bourbon*, and *Martinique*. The principal supply of the United States however is derived from Brazil, which furnishes three-fourths of the whole import. This is known as the *Rio*, and is the kind always supplied unless another variety is asked for.

The only way to secure pure coffee is to buy the raw beans, roast and grind them at home. When coffee is bought already roasted, the disadvantage is in its losing its delicate aroma very rapidly; when it is both roasted and ground, it very generally is adulterated with chicory, peas, or potatoes. *Good* coffee cannot by any means be made from it, and in many cases dangerous decoctions have been made from adulterated coffee. In buying raw coffee, choose that which is dry and light; the coffee which

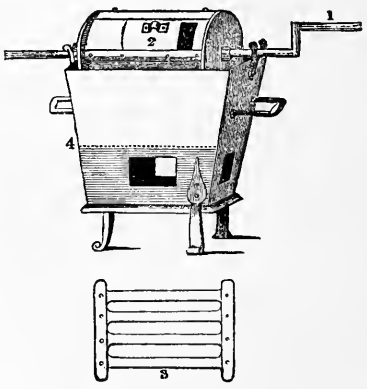


Fig. 1. Coffee Roaster.

feels dense and weighty is green. Coffee which is from eight to ten months old is the best selection.

The roasting of coffee in a proper manner requires great nicety, and cannot be done successfully without the aid of some such apparatus as is shown in the accompanying figures, which may be had in the furnishing stores. Fig. 1 is inexpensive, and the supply of charcoal needed for it is very trifling indeed; fig. 2 is larger, and about double the price. The cylinder which contains the coffee should be only half filled, and it should be turned rather slowly over the fire, which should never be very fierce, until a strong aromatic smell is emitted; the movement should then be quickened, as the bean is in that case quite heated and it will scorch before it is roasted through if slowly finished. When the coffee is of a light, chestnut-brown color, which can be ascertained by sliding back the door of the cylinder and looking at it occasionally towards the end of the process, spread it quickly over a large dish, beat up the white of an egg with

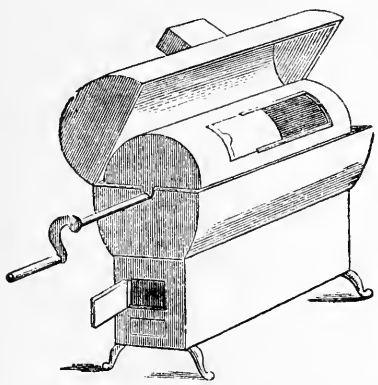


Fig. 2. Coffee Roaster.

a tablespoonful of melted butter, and stir up well with it, and then cover it over with a thickly folded cloth. Let it remain thus until it is quite cold; then put it into canisters or bottles where the air cannot get at it.

For grinding coffee there are two kinds of coffee-mills, those which are portable and others for fixing against the walls. It should be ground to a moderately fine powder; if it is too coarse the essence will be only partially extracted from it in making, while if it is too fine the water will not percolate through it and it will not be clear. *No more should be ground at a time than will suffice for a single making.*

Coffee, (*boiled.*)—Allow a tablespoonful of ground coffee to each person; and for each tablespoonful a coffee-cupful of water. Let the water boil, and while it is boiling stir in the coffee; allow it to boil hard five minutes, then set it where it will simmer for ten minutes; pour out a large cupful, hold it high over the coffee-pot, and pour it in again; repeat this, and then set it on the stove where it will keep hot without simmering for five or ten minutes longer. Coffee made thus will be perfectly clear unless it is mismanaged. Should fining be necessary, however, use a pinch of isinglass, or a small piece of the skin of salt codfish, or, better still, the shell of a raw egg with a little of the white adhering to it.

Coffee, (*Filtered.*)—There are a great number of patent coffee-pots designed to make coffee after the Continental method without boiling, and as minute directions for using accompany each one we will only mention that the principle involved in each is very simple and consists in allowing hot water to percolate slowly through ground coffee into a receptacle below. Some of them are good, though needlessly expensive; but a simple filter or *percolator*, as it is called, will answer perfectly well, and they can be obtained to fit any coffee-pot. In making coffee by this method allow rather more coffee than when it is to be boiled; spread the grounds over the percolator; and pour on the *boiling* water, slowly till the coffee is saturated and then more rapidly. Should the coffee not be strong enough, run it through the filters again. Coffee made thus is thought to have a more delicate and aromatic flavor than when boiled; but on the other hand, Mr. Donovan, a prominent English chemist, who has made a special study of the matter, thinks that it requires boiling for a little time to extract the bitter principle in which much of the exhilarating quality of coffee resides.

A plan which we have ourselves tried with perfect satisfaction is to put the grounds in a flannel bag suspended from the inner side of the lid of the coffee-pot so as to be immersed in the water, and boil for ten minutes. Made thus, coffee is always strong and clear.

Iced Coffee.—Make strong coffee, and when it is cold mix it with an equal quantity of fresh cream, sweeten to taste, and freeze. Iced tea may be made in the same way.

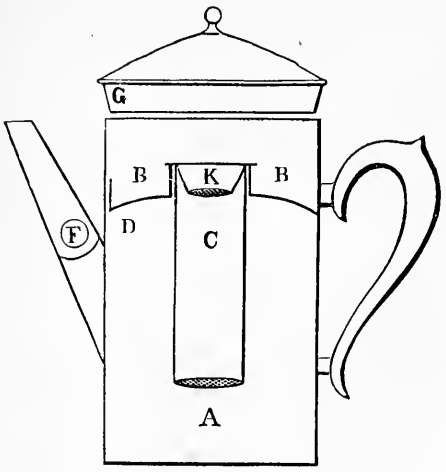
Cafe a la Militaire.—Make some coffee as strong and clear as possible; sweeten it in the cup with white sugar almost to a syrup; then pour half a wineglass of brandy on the top gently over a spoon, set fire to it with a lighted paper, and when the spirit is partly consumed, blow out the flame and then drink the coffee hot.

Cafe Noir.—This is the very essence of coffee and it has become customary to serve it immediately after dessert—either before leaving the table, or in the parlor the moment dinner is ended. In the latter case it is commonly followed by wines. To make it, proceed exactly as above, but add only about a third as much water, the object being to make the strongest possible infusion. About two-thirds of a small cupful—not more—sweetened almost to syrup with white sugar in lumps is usually taken to each person. White sugar candy in powder may be served with it, in addition to the sugar in lumps.

COFFEE-POTS.—Coffee-pots designed for coffee that is made simply by boiling are made

of tin, zinc, or Britannia metal. Those of zinc are better and more durable than the tin; the Britannia pots are the prettiest and most showy, but they cannot be set on the fire or even near it without melting.

There is an immense variety of patent coffee-pots for making coffee by filtering; all draw the hot water through the ground coffee. The principle is very simple and any of them probably can be used with satisfaction. The best one that we know is the "Eureka," though there



The Eureka Condensing Pot.

A. Body of the pot, to hold the water after it has passed through the coffee.
B. Water joint, to be filled with water, which, receiving the rim of the cover (G), makes an absolutely tight joint.
C. Filter, with perforated bottom.
D. Discharge.
F. Valve, to close the spout when not pouring.
G. Hoop of cover.
K. Cup with perforated bottom, to distribute the water evenly over the coffee.
The parts C and K are, in some shape, common to nearly all coffee machines. In many they are put on top of the pot instead of inside of it.

may be others as good. An examination of it, however, will explain the good features common to all, as well as some peculiar to this invention. The French *cafétiere* is excellent and not very expensive; so is the Vienna coffee-pot; and Dr. Smith especially recommends an English invention known as *Ash's Kaffee-Kanne.*

COKE. That which remains from coal after the hydrogen has been eliminated; the kind chiefly employed for domestic purposes in this country is what remains in the gas retorts after the gas has been extracted from the coal for illumination. Coke as a fuel has the advantage of kindling more quickly than anthracite, and giving out an intense radiant heat without either smoke or flame; it is therefore particularly convenient for many purposes. From the clearness with which it burns and the intensity of its heat, it is excellent for certain operations of the cook, when a bright, clear fire is wanted, as for broiling, roasting, etc. Its disadvantages are that it burns out rapidly and will not keep a fire, and that it leaves a great deal of ashes. When burnt by itself, moreover, in close fires, it requires watching to prevent it from fusing that part of the iron-work of the stoves or ranges with which it comes in contact. It is best to mix it with other coal, and used in this way, it makes an excellent and economical fuel.

It is a notion of some that coke is more sulphurous than coal; but this is impossible, as the sulphur is eliminated by the very process of converting coal into coke. Burned by itself, however, coke has all the bad qualities of charcoal, giving out carbonic acid gas, which, if the current or draught up the chimney is not sufficient, will fall down into the apartment.

COLANDER.—A deep tin vessel, shaped like a dish-pan, with holes perforated in the bottom and sometimes in the sides, used for separating the liquid part of substances from the solid. Its varied usefulness renders it an essential part of the furniture of the kitchen.

COLD CREAM.—Take a quarter of an ounce of white wax and shred it into a bowl, with one ounce of almond oil. Place the bowl by the fire till the wax is melted; then add one ounce of rose-water, little by little, meanwhile beating the mixture smartly with a fork; this is to make the water incorporate with the other ingredients, and the beating must be continued till it is accomplished. Then pour it into jars for use.

Or, take of best lard one pound, and of spermaceti four ounces, and melt the two together; then add one ounce of rose-water, and beat it in as above directed.

COLDS.—A cold, however slight, should be attended to at once. When one is felt to be coming on, take a Turkish bath if it can be had, and if not, a common vapor bath. Or if the time can be spared, go to bed, take ten grains of Dover's powder with a little sugar, cover the chest with a hot poultice of bran or oatmeal, and in an hour after the powder drink a pint of hot tea or thin gruel; next morning take a mild cathartic—either Epsom salts or a Seidlitz powder in warm water. If the cold has come on, but is only slight, drink a pint of cold water on going to bed and put on some extra bed-clothes so as to produce perspiration. A good remedy also, is to soak the feet in hot water, not above the ankle, with a handful of salt in it; do this just before going to bed and drink copiously of hot tea, or whey, or lemonade. If compelled to go out to business, put on plenty of clothes and move about as much as possible. (*See* CHEST PROTECTOR and INFLUENZA.)

COLIC.—There are several kinds of colic, all accompanied by severe griping pains in the bowels, with distention or flatulence, nausea, or vomiting; and as the hardness or distention of the belly increases, cramps or spasms occur either in the abdominal muscles or in those of the thighs and legs. The only diseases with which colic can be confounded are cholera and inflammation of the bowels; from the former it

is distinguished by the absence of diarrhœa; and from the last by the pain being relieved by pressure. The exciting causes of colic are very numerous, but it usually comes from exposure to cold, from eating acid or unripe fruit, or from the food taken into the stomach being indigestible. A common cause of colic is the arrest of digestion from attempting severe mental labor immediately after eating.

Treatment.—Colic may sometimes be relieved by applying hot cloths to the stomach, and giving a dose of castor oil with plenty of spice, such as grated nutmeg, cinnamon, etc. If this does not arrest it, and especially if cramps are felt, give an opiate (ten drops of laudanum) and a good drink of hot ginger or cinnamon tea. After a severe attack, it is well to take a mild aperient, and to abstain from all irritating substances in the food, such as fruit, green vegetables, etc. In many cases the absorption of medicine does not take place in the stomach, and the pain continues. When this is the case a dose of from 3 to 5 drops of Majendie's Solution of morphia into the skin by means of a hypodermic syringe will afford relief in a few minutes' time.

COLORS. (*To Restore.*)—When the color of any fabric has been destroyed by acid, wash the spot with ammonia to neutralize the same, after which an application of chloroform will, in almost all cases, restore the original color. The use of ammonia is common, but that of chloroform is but little known.—Another plan with articles which will not be damaged by wetting is to boil them in a ley made of equal parts of quick-lime and wood ashes, rinsing them out afterwards in weak alum water, and pressing them well when nearly dry. (*See* PAINTING.)

COLOGNE.—*Eau de Cologne*, a favorite perfume, named after the city of Cologne where it was first made and where its manufacture is still extensively carried on. It consists of alcohol perfumed with the essential oils. Cologne can always be bought of the druggists, but it is frequently inferior, and it can easily be made at home. The following is Fontenelle's famous recipe:—Take a quarter of an ounce each of dried rosemary, thyme, sweet marjoram, wormwood, balm, and hyssop; a quarter of an ounce each of cloves, cinnamon, angelica root, juniper-berries, anise, cummin, fennel, caraway-seeds, fresh orange peel, and oil of bergamot; and a half ounce each of cardamoms, lavender-flowers, and bruised nutmeg; the whole to be steeped in five pints of warm alcohol several days, and then distilled.—A simpler recipe is to put a pint of pure alcohol into a bottle and add a teaspoonful each of oil of bergamot, oil of lavender, oil of lemon, and orange-flower water. Cork tightly and shake well.

COMBS.—The best toilet combs are those made of buffalo horn, or tortoise-shell; the rubber combs break easily and are likely to warp out of shape, especially if they are ever wetted. Combs should never be put in water, however, even to wash them; for it not only warps them, but makes the teeth split and roughens the substance of which they are made. (*See* CLEANING.)

COMMODE.—This name was formerly applied to a chest of drawers with a place above them for hanging clothes, which combined the advantage of both bureau and wardrobe. As understood now at the furniture stores, it means a highly convenient article of furniture for holding the chamber and keeping it out of sight.

COMPOST.—Any refuse which has enough organic matter to become rotten. What is usually termed compost is made of the dung of any animal, but especially of cows and horses, mixed with earth. It is useful in the flower garden and indispensable in the planting of roses and other flowers demanding a rich soil, and in the cities may be obtained of florists

COMPOTES.—*Compôtes* are fruits prepared in syrup for immediate use, and differ from jams in being cooked less and containing less sugar. They are very delicate when properly made and form an excellent accompaniment for pies, puddings, or dumplings. Or they may be served alone with a little pastry-crust, and in this way make one of the most tempting and wholesome of desserts. *Compôtes* will keep two or three days in a damp, cool closet, but are likely to ferment if kept longer; for this reason they should be made in small quantities at a time.

Apple Compote.— *Take:*–apples, sugar, water.

Peel, cut into halves, and core some apples; after letting them lie for a short time in cold water, drain them, and put them into enough syrup (made of sugar and water) to cover them well, in which boil them till they are soft; then place them in a dish and strain the syrup over them. This compote may be improved by boiling some of the apple in the syrup to a jelly, straining it, and pouring it over the halves as above directed.

Apricot (*Green*) **Compote.**—*Take:*–Apricots, 1 lb; sugar, 8 oz; water, ¾ pt.

Take a pound of green apricots, throw them into hot water, and as they rise to the surface take them out and wipe off the down carefully. Make a syrup of eight ounces of white sugar and three-quarters of a pint of water boiled together ten minutes; into this syrup put the apricots, stew them gently twenty minutes, then turn them into a dish and strain the syrup over them.

Apricot (*Ripe*) **Compote.**—*Take:*–Same as in previous receipt.

Peel, divide into halves, and stone some ripe apricots, and then prick them all over with a needle. Put them into a syrup made as in preceding recipe; stew them gently for ten minutes; turn them into a dish, and strain the syrup over them.

Berry Compotes.—Very nice compotes may be made of blackberries, raspberries, strawberries, or gooseberries, by washing them carefully, putting them into a syrup made as above, and boiling them from one to five minutes. Raspberries and strawberries are so delicate

as to require very little boiling, and it is best to take them off when they have boiled up once.

Cherry Compote.—*Take :*–Cherries, 1 lb; sugar, 5 oz; water, ½ pt.

Simmer five ounces of sugar with half a pint of water for ten minutes; throw into the syrup thus made a pound of cherries weighed after they are stalked, and let them stew gently for twenty minutes. It is a great improvement to stone the cherries, but a larger quantity will be required for a dish.

Currant Compote.—Made same as **Berry Compote.**

Fig Compote.—*Take :*–Sugar, 4 oz; rind and juice of 1 lemon; water, 1 pt; dried figs, 1 lb; wine, 2 wineglassfuls.

Put into a porcelain lined pot, four ounces of fine white sugar, the rind of a large and fresh lemon (or orange-juice and rind), and a pint of cold water. When the sugar is dissolved, add a pound of nice dried figs, and place the pot over a moderate fire where the figs may heat and swell slowly and be very gently stewed. When they are quite tender, which will be in about two hours, add two wineglassfuls of wine, and the strained juice of the lemon; arrange them in a glass dish and serve them cold. *This dish is very fine.*

Orange Compote.—*Take :*–Oranges; sugar, and water.

Peel some large sweet oranges, cut them into slices crosswise, and remove the seed. Make some syrup as directed above, but do not pour it over the oranges until it is cold. This compote requires no boiling.

Peach Compote.—*Take :*–Peaches (*quite ripe*), 1 doz; white sugar, 10 oz; water, 1 pt; lemon-juice.

Pare a dozen ripe peaches, put them into a syrup made of ten ounces of white sugar boiled in a pint of water for ten minutes, and stew them very gently for ten minutes, stirring often. Dish the fruit; reduce the syrup by quick boiling almost to a candy, pour it over the peaches, and serve them hot for a second-course dish, or cold for dessert. The peaches should be quite ripe, and will be found delicious dressed thus. If desired, a little lemon-juice may be added to the syrup.

Plum Compote.—*Take :*–Plums; sugar, 10 oz; water, 1 pt.

Select ripe plums, prick them with a needle, and put them into cold water while boiling a pan of water into which they must be put as soon as the water boils. When they rise to the surface of the hot water, take them out and put them again into cold water. Make a syrup of ten ounces of sugar to a pint of water, and boil them up in it. Put them into a basin and let them cool, and then boil them up once more; skim them well and let them cool for use.

CONGER-EEL.—A kind of eel, sometimes called the "American Conger," much larger than the common variety, being from three to four feet long with the tail ending in a sharp point. They are in season from November to April, but they are rather scarce in the markets and are not much esteemed as food. Cooked same as *Eel.*

CONSOMMÉ.—*Consommé* is concentrated or very strong broth or soup. It may be eaten either by itself or will serve as a sauce or gravy for other meats according to the way in which it is made. To make, put five pounds of lean fresh beef into a soup-kettle, add three quarts of cold water and a tablespoonful of salt, and set it on a brisk fire. When the water boils, place the kettle on a moderate fire and skim off the scum which rises to the surface; then add one carrot, one small turnip, one onion, two cloves, two cloves of garlic, and a stalk of celery. Let it simmer slowly from seven to eight hours, and it is then ready for serving.

A *consommé* of poultry may be made by roasting a couple of fowls until they are about one-third done, and then putting them in a soup-kettle with three pounds of lean beef, and three quarts of cold water and salt. Boil up as directed above, and add the same vegetables and seasonings. After it has simmered for three hours, take the fowls out of the kettle, and let the rest simmer three hours longer. Ladle out the vegetables, strain the liquor that remains, and that liquor is the best *consommé* that can be made. It is, of course, highly nutritious and very strengthening to invalids when their stomach can stand it.

CONSTIPATION.—This is one of the most common of ailments and one of the most difficult to deal with, for though it is the fruitful source of many diseases it is itself less a disease than an indication of functional derangement. Of course the retention of excrementitious matter in the intestines produces serious disturbance of the whole system, which, however, is, as a rule, readily cured by medical treatment, and the adoption of suitable hygienic habits. Dr. Andrew Combe, in his treatise on physiology, says: "In the natural and healthy state, under a proper system of diet, and with sufficient exercise, the bowels are relieved regularly, once every day," and he adds that "*habit* is powerful in modifying the result, and in sustaining healthy action when once fairly established. Hence the obvious advantage of observing as much regularity in relieving the system as in taking our meals." From the earliest age, people should accustom themselves to going to the water closet at a fixed period of each day; and one who persists in this long enough to make it a habit will seldom suffer from constipation. This habit may be supplemented by a glass of cold water every morning before breakfast, which is to some persons a laxative; and alternate contraction and expansion of the muscles of the abdomen may be tried. Such exercise continued ten minutes a day, and persevered in for a week or two, may cure ordinary cases of constipation, provided proper food is taken. For this purpose bread made of unbolted flour and fruit (*especially cooked fruit*), should enter largely

into the diet. Two Compound Rhubarb pills may be taken at bedtime for a few nights, but exercise, diet and regular habits should be the main agents in effecting recovery. For obstinate constipation use injections containing a little salt, or soap-suds, or better still, get the advice of a physician.

CONSUMPTION.—The technical name for this disease is Phthisis, or wasting. By it is meant that form of lung disease where first of all there is a deposit of new material in the substance of the lung. After a time this softens and breaks down; it is expectorated and leaves cavities behind. This process is accompanied by fever of a peculiar kind, and general wasting of the body; whence the name. The deposit in the lungs is by no means always of the same character, though that was taken for granted up to a very recent period. The processes which lead to this deposit are two in number — one is inflammation of the lung substance, and the other is a deposit of a new growth called tubercle. Most frequently the two processes are associated, for the deposit of the new growth sets up inflammation and its consequences. When the substance of the lung becomes inflamed, we have to deal with a very different set of phenomena than when the air passages alone are so affected. The disease may assume a very acute form, such as cannot be mistaken, or it may steal on insidiously, especially if it spreads from the air tubes to the lung substance. The consequence of such an inflammation is the choking up of the little cavities of which the lung consists in a portion of its substance, and the material thus deposited may either remain there for a length of time, or at once proceed to soften and break down. In this process the damaged material of the lung too may take part. It may soften as well as the newly-deposited substance, and breaking down and being expectorated, leave behind a cavity in the substance of the lung. This process may go on quickly or slowly, sometimes very slowly, especially if other changes go on at the same time, such as indurate the texture of the lung, as what has been called fibroid phthisis, a very slow form of the malady. But again there may be a deposit of new substance, the process being by no means inflammatory, and this new growth which is laid down in the substance of the lung is called tubercle. Once deposited, its history is the same, or nearly so, as that of the inflammatory material laid down in the lung cavities. It softens and breaks down, the injured texture of the lung doing so also, and so a cavity is formed. There is yet another mode and kind of deposit; that due to syphilis. This is, perhaps, if a diagnosis can be made, the most hopeful variety of the disease. To both the former varieties of disease there may be a strong hereditary proclivity; if so, this is a circumstance which tells most unfavorably on behalf of the patient, for there are few diseases in which a hereditary character is more prominent than that which commonly goes by the name of pulmonary consumption. It is of the very first importance that this disease should be diagnosed in the earliest stages, for it is then that certain of its forms may be treated with tolerable confidence of success, and all can be dealt with to most advantage. That form which promises most by timely treatment is the inflammatory form, especially that which comes on in a patient who has long been in depressed health from whatever cause. It commonly begins with a slight cough, which, however, persists, and will not go away, and the patient gets gradually thinner. The respiration indicates feebleness, being wavy in character, or even jerking. Besides this, there are certain sounds only to be appreciated by a skilled ear. If with all this, there is a bad family history, the case is one demanding prompt action. This may be taken with good hope of success. Fever is a most important element in such cases. If it keeps high, the chances do not improve; if it gradually diminishes and totally disappears, the patient may be said to have regained his health. Take now a case of tubercular consumption. It may arise from the former, or it may be developed from the products of some long standing disease of other organs, or one lung may infect the other. This form is not so common as the other. Its origin is very insidious; but having begun it goes on. There is considerable uneasiness. At night the temperature is high; and there are troublesome night sweats. There is a persistent cough, and very likely pain in one side. The appetite is very capricious, and very likely there is diarrhœa. With such cases, too, a huskiness, or even loss of voice, is by no means uncommon. This rarely occurs in any other variety of consumption, and so may be looked upon as proof positive of the existence of this form, if any consumption be present.

For the public, however, it is of less consequence to know what variety of consumption the patient labors under, than to know that he has got some form of the disease, or is likely to have it, if the malady he labors under is not arrested. Accordingly, an abstract of the commonest signs is now given; for we desire to impress the public very earnestly that it is in its earliest stages that consumption is remediable. The earliest symptoms are very probably connected with digestion; the appetite becomes capricious; there are pains in the chest, with some cough often dry and hacking, with a small quantity of frothy expectoration. There is debility, flushing of the face on the slightest exertion; at other times the countenance is pale, except there be a hectic patch of red in the middle of the cheek. The eyes look unusually white and pearly; there is some fever at night, and a tendency to night sweats. Very likely there is some spitting of blood; This occurs in a very considerable portion of cases, and is often the earliest symptom calling for attention. Provided it is clear that the blood does not come from the gums or throat, any bleeding by the mouth, especially in a young person, demands attention. As the disease advances

emaciation increases, so that the joints become enlarged by shrinking of the limbs. The club-bed appearance of the ends of the fingers in consumptives is probably due to circulatory disturbances. The night sweats, fever and diarrhœa are the means of reducing the bodily strength and substance; while in some instancies, excessive expectoration aids materially in this process. The capricious appetite and the imperfect digestion leave the bodily supply very deficient, but the spirits of the patient are good, and it is often distressing to see one doomed to an early death talking of the future in a tone of assured confidence. A troublesome complication sometimes seen is fistulæ in the lower bowel, which, if not relieved, taxes the patient's strength sadly. On the other hand, there is always a risk that if an operation be attempted the wound will not heal, and so the latter risk is worse than the first. Usually if the disease be not arrested the patient dies of exhaustion; sometimes he is suffocated or bleeds to death, consciousness continuing to the last. But this result is by no means inevitable; and the dread of the disease as being universally and unerringly fatal, which was wont to prevail, has been shown to be without just foundation. Undoubtedly, if a patient with a bad family history is seen for the first time when the disease is well advanced, we have little ground for hope. True, also, that the tubercular form of the disorder is less amenable to treatment than is the inflammatory. Yet due care being exercised, there are few cases which cannot be benefited; a goodly number which can be cured completely, or, at all events, the lungs so healed that each may be enabled to lead a long life in moderate comfort.

Treatment.—The first and greatest point of all is the selection of the conditions under which the patient is to live. Unfortunately, in too many instances, this is not possible; but where it is possible, and the disease is in an early stage, much may be done. On the continent of Europe, there may be found in different health resorts, people who have all their lives had bad chests, but who by wandering from health resort to health resort, according to the season of the year, are able to maintain life comfortably. If such a thing is not possible, we must try next to select the most favorable conditions possible. The first great point in selecting an abode is the avoidance of damp; it should be situated on a dry and porous soil. This is even of greater importance than temperature, though that too is important, inasmuch as fresh air is a necessity, and daily exercise in the open air even in winter is a thing very greatly to be desired. Such patients must take the greatest possible care of themselves—no risks must be run. They must live plainly; but their food must be nutritious. They must avoid excitement, but cheerful society is of the greatest possible value. They must not fatigue themselves, but daily exercise is incumbent. They must not be exposed to too great heat; but cold is even more to be dreaded. Hence the rule, which is a good one, always to keep indoors between sunset and sunrise. They must try to keep the skin open; but they must avoid perspiration. Hence baths must be regulated in temperature for the individual—tepid, cool, or cold, as the case may be. The bowels must be kept open, but if they are loose, the diarrhœa must be checked. Finally, such patients are on no account to go without flannels; whilst the outer clothing should be changed, if desirable, to suit the different periods of the day and year. At all times it must be warm, so as to avoid risks from cold. For those in the very early stage of phthisis nothing perhaps does so much good as a sea voyage in a mild climate—to the West Indies for instance; though many prefer the longer voyage to Australia or New Zealand; often these do great good, but they must be undertaken early, or the result will be the reverse of favorable. Change of climate in females is apt to provoke derangement of the menstrual function. This should be seen to, as any excessive flow would be very weakening. This, moreover, has to be borne in mind, that in consumption this function almost entirely ceases, and generally does so altogether. Patients, the subjects of consumption, have often, early in the disease, a rooted objection to fat as an article of food. This is the more important, as of all substances it is to them the most necessary. If, therefore, they refuse to take fat as food, we must endeavor to give it as medicine. The form of fat which is most easily digested is cod liver oil. If this be given, it need have no disagreeable taste, beyond a slight fishy flavor which to many is agreeable. It is to be given to the patient cautiously. Often one will say, "I cannot take cod liver oil; it always makes me sick. I have tried it again and again always with the same results." You inquire, and find they have been endeavoring to take one or two tablespoonfuls at a time. As a matter of course they get upset; but if they reduce the quantity to a teaspoonful, or even a few drops, they gradually get accustomed to it, and take almost any quantity. Cod liver oil is, however, food, rather than medicine, and the best time for taking it is just after a meal. The fish oil used in this way should be entirely devoid of color; *every trace of color is an impurity*. Next to cod liver oil as a remedy comes iron. This, too, is best dealt with as a food; that is to say, given along with the meals. The best preparation is the reduced iron, which can be taken in soup. If this is not attainable, the freshly prepared carbonate should be given. Next to these remedies, to be taken along with or after food, to add to the value of food, comes anything which will aid digestion. Pepsine, as procured from the pig's stomach, is for this purpose exceedingly useful, enabling the food to be digested with ease and comfort, when otherwise it would only pass into the intestines, there to putrefy and ferment, and so set up diarrhœa. Four or five grains may be taken for a dose just after a meat meal. If that does not suit, meat digested beforehand

might be tried. When cod liver oil cannot be taken, other kinds of oil may be tried. Of these the best are cream and salad oil. When no oil can be taken, rubbing it into the skin does good; but it creates a horrid smell, which is very trying to the patient. Syrup of the iodide of iron may be given along with the oil, and often does good. Iodide of potassium seldom does, except the disease be syphilitic in its origin. If prescribed at all, it had better be given in decoction of bark. But of bark, the best preparations are the compound tincture and the liquid extract, given in doses of a drachm or so three or four times a day. It is often well to combine some acid with the bark; the best is the dilute nitro-muriatic acid, in doses not exceeding twenty minims. If the perspirations be very troublesome, it is customary to give dilute sulphuric acid; but any acid does good. On the other hand, it is very frequently good to give alkalies instead of acids. These certainly, combined with bitters, very greatly strengthen the appetite and aid digestion. Liquor potassæ is commonly given in doses of 5, 10, or 15 minims, sometimes with bark, sometimes with gentian or other bitters. Certain remedies called hypophosphites have been highly extolled as remedies in the earlier stages of the disease; but their value is uncertain, though they often *seem* to do good. Counter-irritation is good if employed judiciously, so as not to weaken the patient. It is of most benefit where the pleura is concerned, and the patient cannot lie in certain positions on account of pain. It must, however, be employed cautiously; the best form is some liniment, such as croton oil and turpentine mixed. Flying blisters, kept on for only a few hours speedily create counter-irritation, without causing it to such an extent as to prove injurious.

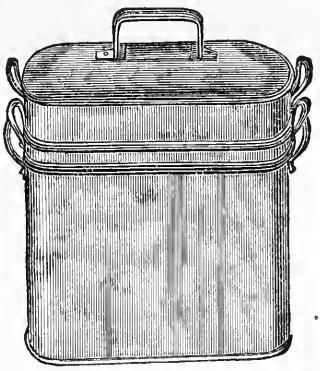
Of the complications to be dealt with one or two yet remain to be noticed. First comes the bleeding. This it must always be remembered is a serious matter, for it may cause death. When it comes on, absolute rest must be enjoined, cold applied to the chest, ice taken internally, and gallic acid with sulphuric acid freely imbibed. Oil of turpentine is also useful, though perhaps less directly. Night-sweats have been alluded to; mineral acids, unless forbidden, are best for them. Diarrhœa must be dealt with cautiously. It must not, however, be allowed to weaken the patient; chalk, opium, and acids are the best remedies. If the throat is bad, nitrate of silver is the best application. For the cough, a little opium, or belladonna may be given; but it is better treated on general principles.

CONTUSIONS. (*See* BRUISES.)

CONVALESCENCE.—The period of recovery from sickness is a most important one, and demands in many instances as much care as the sickness itself. The body is weak, susceptible to impressions, and disposed to morbid actions; and many times a relapse is brought on by causes which would not affect the body at all when it is in a healthy condition. Of course after the disease has been subdued the appetite returns, and it is in the matter of diet that most harm is done during convalescence. As to the food to be given, the advice of the physician should always be acted upon, as the directions vary with the disease. It should be nutritious and easily digested, and in many cases, quite unstimulating; and it should be given often and in small quantities at a time. Too rich food or too much of it will overload the stomach and result in indigestion; and thus, in the eagerness to recover the lost strength, mistakes are made whose consequences are sometimes serious. Convalescents may take light nourishment with advantage early in the morning, as soon as they awake; an egg, for instance, dropped into a glass of sherry wine, or a drink of milk which is usually well-borne by the most delicate stomachs. If the patient is so weak as still to require watching, a little warm beef-tea or chicken broth should be ready to give in case of his waking during the night. An orange to suck, or lemonade to sip, though unnutritious, are refreshing and antifebrile; and whatever tends to give tone to the system assists toward recovery. Care must be taken not to allow efforts to be made in the matter of exercise too early; nor, in fact, must convalescents be pushed forward too rapidly, or tried beyond their strength in any way—beyond their strength of digestion, of sitting up, or of attending to business. (*See* DIET, and SICK-ROOM.)

CONVOLVULUS.—The botanic name for the pretty dwarf Morning Glory, with blue, white-eyed flowers, which grows wild in the fields throughout the country, and is one of the favorite vines for garden culture. It is a hardy annual, easy to cultivate, and a profuse bloomer, and is in flower from June to September. Sow the seeds in May, scratching them lightly into the soil.

COOKER (Warren's Patent).—This utensil, the appearance of which is shown in the accompanying cuts, is the invention of Capt.

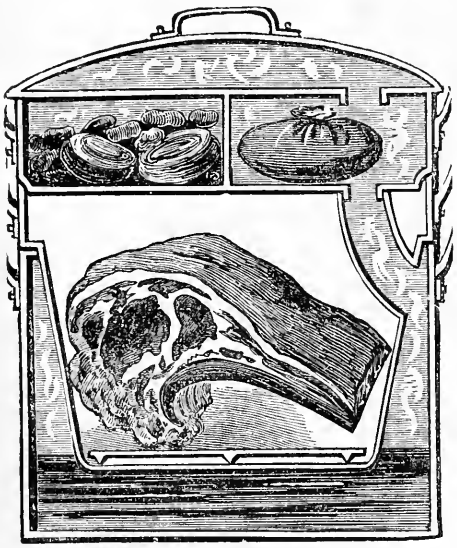


The Warren Cooker.

Frederick P. Warren, of the British navy. It was first designed for the preparation of

food for soldiers and sailors; but it worked so admirably that it was introduced into the regular trade in England, where it achieved a complete success. Its introduction into this country dates from 1870, and we can say, after more than a year's constant use of one, that it accomplishes all that is claimed for it.

The principle of the Cooker is that a tightly-closed vessel containing the meat to be cooked is surrounded by steam, except at its bottom, which rests in boiling water, and at a small portion of the upper part of its sides, which is exposed to the air. The meat rests on a false bottom, which prevents its coming in contact with that portion of the vessel that is in contact with the water at 212°. The exposure of the portion of the sides that is not steam-jacketed causes a loss of heat that reduces the temperature of the closed vessel to about 210°, or 2 degrees less than that of boiling water. As Liebig has demonstrated, this is the best cooking heat. While the full heat of boiling water coagulates the albumen of the meat in such a way as to render it hard, tough,



Warren Cooker (Sectional View.)

and stringy, this lower temperature cooks it completely, and, so far from making it tough, seems to render it more tender. The result is that the meat is cooked much more effectually and temptingly, and at a loss of weight only about half of that produced by the ordinary modes of cooking; while those nourishing juices, which by the ordinary modes would have been thrown off in vapor, are condensed and thrown back upon the meat, and nothing is wasted. The cooker is divided into compartments so that meat and several kinds of vegetables can be cooked at the same time; and its working is so simple that the cook's chances of spoiling food are reduced to a minimum. It is literally true in fact that the cooker will cook the staple dishes of an entire dinner with less demand upon the attention than is usually made by the boiling of potatoes.

COOKERY. With the exception of a few fruits and vegetables, every substance used as food by man requires cooking in some form before its nutritious elements can be properly assimilated. It is not enough to have good raw material, and an abundance of it, but it is also necessary to render it agreeable to the taste and fit for human sustenance. Now as wholesome food is probably the most necessary condition of health, the art of preparing it should be reckoned one of the most important in the whole range of occupations; yet it is not an exaggeration to say that there is more ignorance displayed in our kitchens than in any other department of human industry. Of carpenters, bricklayers, masons, coachmen, or gardeners, we demand knowledge and practical skill in their special work; but of the cook, the results of whose experiments must affect us more intimately than any other whatever, we hardly make a pretense of exacting an acquaintance with even the rudiments of the art. In fact it is just these rudiments that are most neglected. It is not very difficult to obtain cooks who can make good cakes, pies, puddings, and fancy dishes, and when skill in this is lacking it can usually be supplied by the mistress of the house; but the notion is current that such apparently simple processes as roasting, boiling, and baking come by nature and are too unimportant to require study or practice. Many persons, too, associate the idea of great wealth with culinary perfection, though nothing could be more mistaken. Baked bread, and roasted, broiled, and stewed meats and vegetables must always and under all conditions form the staple articles of our diet; and skill in preparing these is not only compatible with limited means, but is important just in proportion to the smallness of the amount that can be spent on luxurious dainties. Carême, the most famous of French cooks, when he had fixed upon his career, took a long series of lessons in *roasting* from the best cooks of Paris: he found it necessary to give months to the mastery of this single process, deeming it, as he said, "the foundation of the whole culinary art;" and knowledge of these simple processes should be either exacted of, or imparted to, every one who undertakes even the plainest family cooking. Nor is it necessary that cooks should study chemistry in order to become proficients in their art. On the contrary, the principles of science applicable to cookery are few and simple, and cooks have only to exercise their senses diligently, and give heed to the results they indicate, and they will soon master all the essentials of good, plain cooking. A thorough practical knowledge of the processes described in our articles on BOILING, BROIL-

ING, FRYING, ROASTING, and STEWING, will form a really good cook far sooner and more completely than any mere array of receipts can do, however minutely they may be explained; and we commend them to the careful study of every one who is responsible for the management of the kitchen. Mastery of these and of the details given in the articles on the KITCHEN, will render it unnecessary for us to add more here to the specific directions given throughout the volume—except perhaps a few words on seasoning.

Seasoning is the rock on which inexperienced cooks are most frequently wrecked, and it is a branch of the subject most difficult to give instructions about, since tastes differ so widely, and the amount of seasoning often depends on considerations of individual health. The effect of seasonings, added in reasonable quantity, is to increase the digestibility of food. They effect that object either by stimulating the action of the gastric juices, or by giving an impetus to all the bodily functions in such a way that its effects, general in themselves, become in their turn a cause of increased activity in the functions of the stomach. The absence of seasoning has for its effect the prolonged retention in the stomach of many relaxing and obstructive substances which have little power of themselves to solicit the action of that organ. Immoderate use of seasonings has for its results, first, the production of an artificial appetite, which tempts to the loading of the stomach with more food than it can properly digest, and consequently produces either acute or chronic irritation; and, second, it is sure to bring on in the end languor and debility of the digestive organs, and derangement of all the related functions. The cook's practice must be guided by the habits and tastes of her employer; at the outset, it is best to be light-handed with the spice—many stomachs are deranged for days by an over-dose of pepper or cayenne. When once, either by experiment or inquiry, the proper proportions have been hit upon, they should be carefully maintained thereafter, as any material variation in the amount or degree of seasonings is not only ungrateful to the palate, but injurious to the health.

COOKIES.—Take a teacupful of butter, two teacupfuls of sugar, half a teacupful of milk, four eggs, two teaspoonfuls of baking-powder, and half a grated nutmeg (or flavor with lemon). Mix these all well together, and add flour enough to make a batter just stiff enough to be worked with well-floured hands; roll out, cut into round cakes, and bake in a quick oven.

Sugar Cookies.—Take one egg, one teacupful of butter, two teacupfuls of sugar, six tablespoonfuls of milk, one dessert-spoonful of bitter almonds, one teaspoonful of cream-tartar, half a teaspoonful of saleratus and flour. Roll out, cut into cakes, and sift sugar over before baking.

COOLERS.—The methods employed in domestic economy for producing artificial cold may be reduced to three: 1, the application of some body naturally colder than that to be cooled; 2, by evaporation; 3, by the solution of certain saline substances. Sometimes two of these methods are combined to increase the effect. The first method is almost universally practiced where ice can be had, and for this purpose water-coolers, and wine-coolers, and cream-freezers, are especially manufactured. When ice is used to cool wine, it will not be very effectual if applied, as is frequently done, only to the bottom of the bottle; for the coldest part of the liquid being already at the bottom cannot ascend, nor can the upper part, which is the warmest, change places to be cooled, so that the cooling will be very imperfect. To cool the wine effectually, the whole bottle should be plunged into the ice; but before this is done it is best to decant it, as, if there is any sediment in the wine, it will mix with it as if the bottle had been shaken, owing to the up and down currents that always take place in the cooling. When ice cannot be procured, well water supplies a useful substitute to a certain degree. A well of forty to fifty feet deep always preserves the mean temperature of the country, and consequently is colder than the summer heat of any place; hence if a bucket of water be drawn, and a bottle of wine or other liquor immediately placed in it, it may be cooled considerably.

One of the most general and useful modes of cooling is by evaporation. Any substance which is wetted with water, and kept in the air, will be cooled by the evaporation of the water, and all the more rapidly if placed in the wind. A bottle of wine, or an earthenware jug of water or any other liquid may be cooled surprisingly by wrapping it in a wet cloth and placing it in a shady place. It is best to suspend it either under a tree or in a passage, so as to expose it to the briskest current of air that can be obtained, and as fast as the water evaporates the cloth should be resprinkled. The third method of freezing and cooling is by the solution of chemicals, as follows: 1 lb of muriate of ammonia, finely powdered and intimately mixed with 2 lbs of nitrate of potash, also powdered. This mixture is to be known as No. 1. No. 2 is made by crushing 3 lbs of sal-soda. To use, take an equal quantity in bulk of No. 1 and No. 2, stir well together; then introduce into the freezer, and add as much *cold* water as will dissolve the mixtures. For example, if 1 pint of No. 1 is used, and 1 pint of No. 2, it will take 1 pint of water to dissolve them; and if the materials employed are cold, the temperature will fall to 35 degrees below freezing point. The two powders, Nos. 1 and 2, must be kept separate in close-covered vessels; if the crushed sal-soda is exposed to the air, it loses the water it contains and is much weakened, while, if the other mixture is exposed, it absorbs moisture from the air, and is dissolved.

COPPER-WARE.—Chemists and physicians have repeatedly pointed out the dangers arising from the use of copper vessels in culinary operations; but on account of the mellea-

bility and hardness of the metal, it still enters largely into the manufacture of kitchen utensils. There are many reasons why these utensils should be banished from the household; they not only frequently impart a peculiar and disagreeable taste to food prepared in them, but are highly dangerous unless they receive an amount of attention which they are not at all likely to receive under the present management of our kitchens. If copper is put away damp or in a damp place, it rusts and is converted into a carbonate of copper, which is a violent poison. It is also acted upon by fat and oil of every description, this same carbonate of copper being found: therefore when copper vessels have been used for preparing food, fat should never be suffered to remain in them. Many cases of poisoning have occurred from soup, or other food into which fat entered largely, having been left for some time in copper boilers. It is also easily acted upon by acetic acid or vinegar, and a green substance is formed, well known by the name of *verdigris*. This is an acetate of copper, the poisonous nature of which is generally known; it is a powerful emetic, producing vomiting as soon as it is swallowed, without exciting nausea.

Tinning on the inside prevents copper vessels from having the injurious effects upon the food prepared in them which they would otherwise have; but the tin is very likely to get rubbed off before attention is attracted to it. All copper vessels should be examined every time they are used; the inside and the covers should be kept well tinned, and no food should be allowed to remain in them any longer than is necessary for preparing it for the table.

CORDIALS.—For those of commerce see under their respective names, or under LIQUEURS.

Anise-seed Cordial.—*Take:*—Oil of anise-seed, ⅜ oz; refined sugar, 2 lbs; rectified spirits, 4 gals.; alum, ½ oz. Mix the several ingredients; bottle and seal.

Blackberry Cordial.—*Take:*–Blackberries; sugar; cinnamon; brandy, or whiskey.

Place blackberries in a kettle over the fire, with a very small quantity of water in the bottom of the kettle. Let them boil until quite soft, and then strain them through a bag until the juice is all extracted. Put the juice on the fire again, sweeten to the taste with white sugar, and throw in a little bag of stick cinnamon. After it has boiled about half an hour, take it off, and stir in brandy or whiskey enough to make it as strong as desired; then bottle it, and seal the bottles with wax. This makes a very pleasant and invigorating drink.

Caraway Cordial.—*Take:*–Oil of caraway, ⅜ oz; sugar, 2 lbs; rectified spirits, 4 gals; oil of cinnamon, 5 drops; oil of orange, 1 drop; oil of lemon, 1 drop; alum, ½ oz.

Put three eighths of an ounce of oil of caraway, and two pounds of sugar into four gallons of rectified spirits; add five drops of oil of cinnamon, one drop of the essential oil of orange, and one of the essential oil of lemons; fine with half an ounce of alum.

Cinnamon Cordial.—*Take:*–Oil of cinnamon, 1 pwt; sugar, 4 lbs; rectified spirits. ¾ lb; orange peel, lemon peel, cardamom seed, ½ oz each; water, 1 gall; alum.

Dissolve one pennyweight of oil of cinnamon with four pounds of sugar in three quarters of a pound of rectified spirits; add half an ounce each of orange peel, lemon peel and cardamom seeds; put one gallon of water to the whole. Fine with alum, and if you wish it colored, add some burnt sugar.

Citron Cordial.—*Take:*–Ess. of lemon and ess. of orange, ¼ oz each; sugar, 2 lbs; lemon peel and orange peel, 2 oz each; rectified spirits, 3 galls; dried figs, 3 lbs.

Beat up a quarter of an ounce of essence of lemon, and as much of that of orange, with two pounds of refined sugar; add to this two ounces each of dried lemon and orange peel; infuse this in three gallons of rectified spirits that has stood upon three pounds of dried figs for a week. If it is too strong, add some water.

Gin Bitters.—*Take:*–Ess. of lemon, and ess. of orange, ¼ oz each; oil of wormwood, 1 drachm; orange peel, ½ lb; sugar, 3 lbs; gin, 5 galls.

Mix half an ounce each of the essence of lemon and orange, one drachm of oil of wormwood, and half a pound of dried orange peel, with three pounds of refined sugar; add this to five gallons of the best gin, and let the whole remain together two weeks, when it will be ready for use. Dilute with water to the taste.

Ginger Cordial.—*Take:*–Whiskey, 1 gall; ginger, ½ lb; currants, 4 lbs; bitter almonds, 2 oz; lemons, 3; sugar, 5 lbs.

To a gallon of good whiskey, add half a pound of bruised ginger, four pounds of red or white currants, two ounces of bitter almonds, the juice of three lemons and the rind of one. Let it stand ten days; then strain it twice, add five pounds of white sugar, and bottle it for use.

Quince Cordial.—*Take:*–Quinces; French brandy; sugar; bitter almonds, or peach kernels; cloves.

Take ripe quinces, wipe off the fur, and grate them fine. Press out the juices of the pulp through a strong cloth, and to each quart of the juice put two thirds of a quart of French brandy, a pound and a half of white sugar, a hundred bitter almonds, or peach kernels, and a dozen cloves. Put it in a stone pot, cover it tightly, and keep it a week in a warm place; then skim and bottle it, and let it remain a year before using it.

Peach Cordial.—*Take:*–Peaches; French brandy; sugar.

Select ripe, juicy peaches, wash and wipe them to get off the down, and gash them to the stone. Put to each peck of peaches a gallon of French brandy, and cover them up tightly. Let the whole remain two months, then drain the brandy off the peaches, add enough cold water to render it of about the strength of good

white wine, and to every three gallons of it put four pounds of white sugar. Stir up well; let it stand a couple of days, stirring it well each day; then turn it into a wine-cask, close tightly and draw as wanted.

CORDUROY.—A thick cotton stuff, ribbed or corded, the projecting part having a pile like velvet. It is very strong and durable, and much used for men's clothing. The best kinds are twilled.

CORIANDER.—This annual plant, of Eastern origin, is cultivated in this country for its seeds, which are highly aromatic and pungent, and form one of the less agreeable spices: they are employed in cooking for flavoring cakes, etc., by the confectioner for incrusting with sugar, and by the druggist in medicine. Its leaves are also sometimes used in soups and salads.

CORN.—The "corn" of America is Indian corn, or maize, and its use here is more extensive than in any other part of the world. Ground into meal after it arrives at maturity, it makes excellent bread and enters into a multitude of dishes; but these are treated of in their appropriate places, and we shall confine ourselves here to the *green corn* prepared and eaten as a vegetable. There are many varieties of this, of which the *sweet corn* is considered best for boiling; and of this quality there are several kinds, caused from peculiar culture, soil, or climate. To raise, it should be planted in good garden soil as soon as the frost is well out of the ground, and at intervals, until July 1st; putting three or four grains in hills, three feet apart each way. It is necessary to keep the ground free from weeds by frequent hoeing.

Indian Corn.

Green corn appears in the southern markets about the 1st of June, whence it is brought north; in the Middle States it is ready for use by the middle of July in favorable seasons; and in the New England States about the 1st of August. By a succession of crops it continues to be soft and good until the middle of October, and sometimes later. Green corn, as found in the markets, has generally been plucked too young; it should at least have attained its full size of kernel, and is never unwholesome if used then. It also soon deteriorates after it is gathered. If possible it should be eaten the same day it is picked; by the second day it inevitably loses much of its flavor, and, moreover, becomes difficult of digestion. If any is to be kept over twenty-four hours, it is better to shave it off and cook it; that is, if there be ice to keep it on, for when cooked it sours readily.

Boiled.—Boiling on the cob is the simplest way of cooking corn, and, all things considered, the best. Strip off the outer husk of the ears till the inmost covering is reached; turn this back and carefully pick off every thread of silk; then put them into a boiler with only enough hot water to cover them, in which a tablespoonful of salt has been dissolved, and cover the boiler closely; cook from ten to fifteen minutes for young and tender corn, while twenty minutes ought to cook sufficiently any sweet corn that is fit to be eaten green. Serve in a covered dish, or cover closely with a napkin.

Some prefer to have the corn cut from the cob while hot and seasoned with butter, pepper, and salt, before it is sent to the table.

Dried.—Corn for drying should be picked early in the morning, husked and cooked at once, shaved thin with a sharp knife, and dried as rapidly as possible, either in the oven, in a drying-rack or chamber, or, better still, under a hot-bed sash. If properly managed, it can often be thoroughly dried in a single fair day, and this is very desirable, as no fruit or vegetable deteriorates so much by exposure as green corn. Grated green corn can also be dried, but it requires even greater care, as it is best not to scald it before drying. Dried corn packed away in a dry place, can be kept through the winter; and when subsequently soaked out in milk-warm water it can be used for most purposes as well as when freshly grated.

Fritters.—Grate the corn, or having scored every row of grains lengthwise, cut off the mere outer part, then push out the cream and kernel with the back of the blade. To the corn cut from twelve large ears, add two well-beaten eggs, three even tablespoonfuls of flour, and salt to the taste. Mix well and drop in hot lard a fourth of an inch deep. When browned on one side, turn the other.

Muffins, etc.—Very nice muffins can be made with one part grated corn, one part water, and two parts of wheat-flour or oatmeal; or it may be baked in a covered spider. Griddle cakes, biscuit, and other dishes, can be readily contrived by an intelligent cook.

Roasted.—Green corn can be roasted by placing it, properly husked and silked, on a gridiron over a bed of coals, and turning it frequently. A better way is to open the husks, pick off all the silk, replace the husks closely, and then bury the ears thus protected in hot wood ashes. In either case care must be taken not to scorch it, as the scorched portions are indigestible.

Stewed.—To a quart of corn, cut as for *Fritters*, add half a pint of rich milk, and stew until cooked in a covered tin pail placed in a kettle two-thirds full of boiling water. Cover the kettle and allow about two hours, removing the covers occasionally to stir the corn. Ten minutes before serving add salt, white pepper, and two or three ounces of butter.

II. (With Tomatoes.)—Cut the corn from the cob and put it with an equal quantity of tomatoes that have been sliced and peeled; stew these together for half an hour; then season to taste with salt and pepper—a very little sugar may also be added if the sweetish flavor is

liked; stir in a liberal piece of butter; simmer the whole together a quarter of an hour longer. Serve in a covered dish. (*See* SUCCOTASH.)

CORNICE.—(*See* CURTAINS.)

CORNS—are always caused by the pressure of tight boots and shoes, the friction of loose and unyielding ones, or badly fitting stockings. The preliminary to any permanent cure must be the removal of the cause; no foot can be kept free from corns unless a proper shoe is worn, without the ridiculous high heels which are a prolific source of other troubles besides this minor one. This being attended to, the corn can be easily eradicated. All that is necessary is to soften it by soaking the foot in warm water, and then remove it with the finger-nail, or a needle, blunt knife, or file of steel, or pumice-stone. When the corn is of long standing, however, it is sometimes necessary to resort to severe measures. In such a case soak it in warm water and pare it down carefully with a sharp knife; then soap the cut surface slightly, take a bit of lunar caustic, and gently touch the soaped and cut surface once or twice; after a little time, wipe off the soap, and apply a small bit of diachylon plaster, spread either on linen or leather. In a few hours the tenderness will subside, and the surface, where touched by the caustic, will be brown or blackish and the pressure of the shoe can be very well borne. *Be careful not to apply the caustic beyond the horny spot.* In very obstinate corns a surgeon should be sought. The operation for removing corns is painless, bloodless, and brief; and it will be effectual if the exciting causes be afterwards avoided. The fenestrated corn plasters sold by the apothecaries are to be recommended. *Cook's Infallible Corn Remedy* has proved of great service to the writer and many of his friends.

For soft corns, between the toes, dissolve a piece of ammoniac, of the size of a bean, in an ounce of warm water, and apply hot.

CORPULENCE. (*See* BANTING and DIET.)

CORROSIVE SUBLIMATE.—POISON.—*Symptoms:* Intense pain in the bowels and stomach, with vomiting and diarrhœa. *Treatment:* Mix the whites of twelve eggs in two quarts of water, and give in the largest possible draughts every three minutes till the vomiting occurs. Flour and water will answer, though not so sure as the above; and warm water, swallowed copiously, will help when nothing else is in reach. Tincture of Peruvian bark is a good remedy. Also milk, either sweet or sour.

A bi-chloride of mercury, often used in medicine for cutaneous and other diseases, and in the household for destroying vermin. Taken internally it is a violent poison, corroding the parts with which it comes in contact.

CORSETS.—As usually worn, corsets have no support from the shoulders, and consequently the entire weight of the dress, petticoats, etc., resting upon or above them, presses upon the hips and abdomen, and this in such a way as to disuse and weaken some of the most important supporting muscles of the abdomen, and impede abdominal breathing. Of course such an unnatural mode of dressing is injurious at best—curvature of the spine being a common result; but when too tightly laced, as they generally are, they compress the lungs and heart, thus impeding the vital functions of respiration and circulation, and producing debility and not infrequently the most terrible organic diseases. Corsets should always be made to pass over and derive support from the shoulders; and the metal plate or *busk* up the front should be dispensed with entirely. It is a great improvement also to use a silk cord, instead of cotton or linen, for lacing them.

COSMETICS.—This term is usually applied to substances used for the purpose of beautifying the skin. They may be divided into two kinds: those which are injurious and even dangerous by reason of some of the ingredients of which they are really composed; and those which, though harmless in themselves, are highly injurious when applied to the skin, because they arrest that insensible perspiration through the pores by which the temperature of the body is preserved and a large part of its refuse matter thrown off. Under the first class fall nearly all those French preparations, so often used in the toilet, such as *Pearl-white, beruse, Rouge*, and the like; these are never composed of the harmless materials which are claimed to be employed, and in *Rouge* arsenic has repeatedly been detected. The least objectionable article used as a cosmetic is the mixture of hydrated oxide of bismuth with the subnitrate of the same metal, known as the *magister of bismuth.* Applied to the skin, its only injurious effects appear to be the interruption of the insensible perspiration referred to above, which after long-continued use produces a tendency to clamminess; a slight nausea, too, is sometimes experienced in consequence of its use, accompanied with spasms and flatulence. It has the disagreeable quality, however, of turning black on the face when exposed to sulphuretted hydrogen, a gas frequently met with in badly-ventilated rooms, and, indeed, everywhere that gas or sewers exist. The perfume of onion also has a tendency to turn it black. There is nothing, it must be borne in mind, that can really beautify the skin except bathing, exercise, and a regular compliance with the laws of health.

COSTIVENESS. (*See* CONSTIPATION.)

COTTON. (*See* CLOTHING.)

COUGH.—A cough is merely the symptom of some other disease, and gives warning of danger. It should never be doctored as such, but its treatment must depend on the disease by which it is caused. When it is aggravated by a constant titillation in the throat relief may be had by dissolving a bit of hoarhound or lemon candy in the mouth and swallowing the saliva. A pinch of salt dissolved on the tongue is also good. When the cough is simply the accompaniment of a cold, the following is a good remedy:—Mix eight teaspoonfuls of molasses, forty of vinegar, two of antimonial wine, and four drops of laud-

anum; take two teaspoonfuls at night and one in the morning.

When a child has a cough as an accompaniment of a cold, quite small doses of syrup of ipecacuanha are usually very good. To a child only a month or two old, the syrup of tolu may be given in doses of one-fourth of a teaspoonful, in a teaspoonful of water, every three or four hours. When the child is older, say three but under six months, use the syrup of ipecacuanha, but of this only three to five drops in a teaspoonful of water, once in three or four hours. From the sixth to the twelfth month, five to twelve drops may be given; and during the second year from a fourth to a half teaspoonful. When these doses cause vomiting, let a longer interval elapse between them. For children that are over two years old, nothing is better than the old-fashioned "brown mixture," which is made thus:—Take of powdered gum arabic, two drachms; extract of liquorice, two drachms; boiling water, four ounces (one gill). Dissolve the gum arabic and liquorice in the water, and add of wine of antimony, two drachms (two teaspoonfuls), and of laudanum, twenty drops. The medicine should be thoroughly shaken up before the dose is poured out. Half a teaspoonful may be given every three hours to a child under four years, and may be increased to one teaspoonful, given with the same interval. For an older child, a correspondingly larger dose may be given; the proper quantity may be judged of from the fact that the dose for an adult is one tablespoonful. This mixture will not keep well in a warm place, and small quantities should therefore be made at once.

COUGH-CANDY. (*See* CANDY.)

COUNTERPANE. (*To clean.*)—White cotton counterpanes should be washed in a large quantity of strong suds twice over, scalded, and then rinsed in clear cold water; on no account wrung, but carried to the drying ground in a washing-tub and spread out over the line. Before they are thoroughly dry, they should be folded quite smooth and flat, and left in that state for ten or twelve hours, after which they should be opened and aired, to get rid of the musty smell.

COW.—In the following observations we confine ourselves to treating of cows intended for the domestic dairy. Cows may be bought at any of the markets or fairs throughout the country, and cost from 60 to 125 dollars. It is important in selecting one that she should be a good milker, and in healthy condition, though if a rich milker she may be very lean. Indeed, this is a good sign, if the cow is evidently vigorous and is in full milk—it indicates that she secretes fat with the milk rather than in the flesh. By way of suggestion on these points we quote from Mr. R. L. Allen's treatise on "Domestic Animals." He says: "There are certain points in a good milker that can hardly be mistaken. She should be descended from the best milking stock; her head should be small or of medium size, muzzle fine, and nostrils flexible and expanded; face long, slender, and dishing; cheeks thin; eyes full, mild, and prominent; horns delicate and waxy; long, thin, lively ear, with the inside of an orange color; neck thin and small at its junction with the head; deep chest, but not too heavy before; back level and broad; well ribbed; belly large; low flanks; wide thighs, but thin; short legs, and standing well apart; large milking veins; loose, capacious udder, coming well out behind; good teats; loose, mellow skin, of a deep yellow; and a fine, thick coat of glossy hair." But these descriptive indications will be of little or no use to a person inexperienced in the purchase of cows; and it is best to have the selection made by some one skilled in the matter, in whom confidence can be placed. In order to make sure of obtaining a cow that will continue in milk a long time, it is best to buy one with a calf from a fortnight to a month old. It is a common trick, in offering cows for sale, to leave them unmilked, in order that their distended bags may impose on the buyer. It is never safe to buy a cow that has been subjected to this treatment.

A cow may have her first calf when between two and three years old. The average time of gestation is from 40 to 41 weeks; though they sometimes go only 34 and occasionally overrun 44. A dry, unoccupied stall or yard is best for her to calve in; and if there is any serious delay or difficulty in the birth, she may be assisted by placing the fœtus in the right position, and gently pulling it with every throe of the dam. When, from neglect, a calf is dropped in the yard or field, there is great danger of its perishing (and this may imperil the life of the cow). Should this happen, and the mother take cold (which may be known by her shivering and refusing her food), she ought immediately to be driven into a warm place, together with her calf, and fed with a warm bran mash and a little hay, and should not be suffered to drink *cold* water.

Before the calf has drawn all he wants at morning and evening, the bag should be quickly and thoroughly emptied of all the milk. If strong and vigorous, the calf is the best doctor for garget or caked bag. He may be allowed to suck or not, at the option of the owner; but if the cow is to be "dry-milked," the calf should be separated from her as soon as he is able to stand up. The cow should be stinted in her food for two or three days, and not fed freely for a week. Avoid fat in a breeding cow. Too high feeding is the cause of milk fever, caked bag, and a host of evils; and very poor feed, except at calving time, is almost equally objectionable.

A cow should be dried off at least for two weeks before calving, and the milk should not be used by the family until four days after the event. Always see that the calf gets the first milk of the cow.

Diseases.—Many cows are lost from the want of knowledge how to treat certain diseases

to which they are liable, so we include here such remedies as can be easily applied, and are likely to prove effective.

Caked Bag may be removed by washing with warm water frequently; poultice the bag with belladonna leaves poultice; in bad cases wash with a *weak* solution of carbolic acid.

Choking is usually caused by a root getting stuck in the throat. If within arm's length, it may be removed by the hand. Or pour down the throat a pint bottleful of soft soap, mixed with sufficient hot water to make it run freely. Should this fail to remove it, tie up the fore-leg with a small cord close to the body, and give the cow a sudden start with a whip. You may pass a small smooth rod easily down the animal's throat, inserting first a piece of wood ——o—— in its mouth, and keeping the rod pressed back of the wind-pipe.

Garget is an intense form of caked bag, and shows itself in hard bunches on the udder. Bleed the cow, give a large dose of Epsom salts, and wash the udder as in caked bag.

Hoof Ail is indicated by lameness, fever, and a soft swelling just above the hoof. In all these cases treat with carbolic acid and keep the hoof clean.

Hoven is a temporary ailment, caused by eating too freely of fresh and generally wet clover, or other succulent food. It is known by the swelling of the paunch, and difficulty of breathing, and unless speedily relieved, suffocation and death will ensue. The paunch is full of gas, caused by the decomposition of the food. In the early stages, when not too severe, it may be cured by any of the following remedies:—A pint of gin poured down the throat. From one to two pints of lamp or other oil. Strong brine. A tablespoonful of hartshorn in a pint of water. A wineglassful of gunpowder, mixed with cold lard and forced in balls into the stomach. A teaspoonful of unslaked lime, dissolved in a pint of warm water, shaken and given immediately. A pint of tolerably strong ley. By far the best treatment of Hoven, however, is half an ounce of carbonate of ammonia, in a pint of *cold* water—or pour cold water over the back; when very bad cases occur, puncture with a trochar or knife, half way between the last rib and the hip and four inches from the spine, to let out the gas.

Mange or Scab is denoted by the animal rubbing the hair off the eyes and other parts; the skin is scaly or scabby, sometimes appearing as if covered with large seed-warts. Wash the skin with soap and warm water, and rub the spots with a mixture of sulphur and lard. When the skin is cracked take one pound of sulphur, a quarter of a pound of resin, two ounces of mercurial ointment, and one pint of linseed oil; melt the resin and warm the oil, and when partly cooled, stir in the sulphur; when cold add the mercurial ointment, mixing all well. Rub this thoroughly with the hand on the affected parts. Mange is in all animals a parasitic disease. Wash with a solution of carbolic acid 1 to 20 or 1 to 30 of water.

Milk Fever is caused by cows being in high condition at the time of calving; it can almost always be avoided by keeping them in moderate feed and flesh. To cure, bleed freely, say six to ten quarts; then give from one to one and a half pounds of Epsom salts, to be repeated in half-pound doses every six hours till the cow purges freely. When purgatives are tardy in their action an injection of warm water and soap should be given. Only bleed in early stage, keep the animal moving every 20 minutes, and give drenches.

Scour, or diarrhœa, may be cured by giving any of the fixed oils 1 pt, or an ounce of powdered chalk, nurse well and give good food. Diarrhœa is caused by the presence of an irritant in the stomach, which must be removed.

Sore Teats may be cured by rubbing them with goose oil, cream, or new milk. Or wash the bag and teats with warm water, and apply the ointment: melt together one ounce of yellow wax and three ounces of lard, and when cool rub in a quarter of an ounce of sugar of lead, and a drachm of alum finely powdered.

Warts are of two kinds: the first, on the outer skin, may be removed by rubbing with camphorated olive oil. The other kind penetrate into the flesh and may be removed by a ligature of fine thread or silk; tie it tightly round the wart, and it will fall off in a few days.

Wounds. In simple wounds always catch the skin together with two or three stiches, having first well cleansed the part. Then place over this a small rag wet with water only, with 1 or 2 drops of carbolic acid; over this place some India rubber or oil silk, the object is merely to exclude the air and prevent decomposition. Dry earth is useful in cases where there is a great discharge of matter.

Food.—The modes of feeding cows are technically divided into *grazing*, or feeding on grass in the fields; *soiling*, or giving them green food cut and taken into the house; and *stall-feeding*, which is confined chiefly to hay and grain, together with succulent roots, either raw or steamed. Notwithstanding all that has been said concerning the good qualities of certain roots and artificial grasses, experience has shown that no food is comparable to good natural early pasture for milch cows; for not only does it yield a greater quantity of milk, but the flavor of grass butter may always be distinguished by its superior richness and delicacy, from that made of milk produced by feeding in the stall. Roots of all kinds, as carrots, parsnips, mangel-wurzel, and potatoes are excellent food for cows, as also are peas and cotton-seed. Turnips are much used, but unless fed immediately after milking, they impart a disagreeable flavor to the milk and butter. In the winter, to keep cows in the best condition for milk, they should have abundance of hay (clover-hay is best), and cornstalks cut up, thoroughly soaked in water for half a day, and then sprinkled with corn-meal; oil-cake is good. The amount of meal may vary; but corn-meal alone, in large

quantities, is too heating. Common salt is much relished by cows, and, when added in moderate quantities to their food, is said to improve their milk as well as their general health.

The best time to feed cows is as soon as possible after daylight in the morning, at noon, and a little before sunset, leaving sufficient intervals for them to lie down and ruminate.

The water given to cows should be of the purest kind, and they should have access to it at all times, or have it frequently offered to them. Some recommend stirring a handful of corn or oat-meal in each draught occasionally.

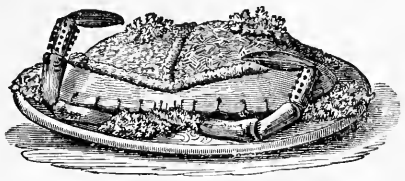
Milking.—This is an important operation, and unless it is properly done, not only will a reduced yield of milk be the result but the cow herself will be spoiled. It is best to milk twice a day, at intervals of about twelve hours, though if a great deal of milk is given it pays to milk three times a day, as nearly as possible eight hours apart. In milking, sit with the left knee close to the right leg of the cow, the head pressed against her flank, the left hand always ready to ward off a kick, which the gentlest cow may give almost without knowing it, if her tender teats be cut by long nails, or if a wart be hurt, or her bag be tender. Put the fingers round the teat, close to the bag; then firmly close the forefinger, immediately squeezing with the other fingers. The forefinger prevents the milk from flowing back into the udder, while the others press it out. A cow must be stripped dry every time she is milked or she will gradually dry up. Moreover, not only will the quantity of milk be diminished, but the quality will also be inferior; the first of the milk is poorest, and it gradually becomes richer until the last drainings of the udder are nearly as rich as cream. Never stop while milking, as this may cause some cows to hold up their milk.

COWPOX.—The disease caused by vaccination. It is in the vast majority of cases nothing more than a slight fever which lasts while the pustule is in its most inflamed stages, and requires no special treatment. In those few instances where vaccination causes a violent fever it is generally complicated with some other causes, and cannot be treated without medical advice.

CRAB.—Though not so popular as lobsters, crabs are among the most pleasantly flavored fish of their class. They are in season from June to January, but are considered to be more wholesome in the cold months. The middling size, when heavy, lively, and possessed of large claws, are the best and sweetest; if light, they are poor and watery. When crabs are stale, the eyes look dead, the claws hang down, and there is no muscular activity; in this condition they are not fit to eat. The female is considered inferior to the male, and may be distinguished by the claws being smaller, and the apron, which appears on the white or under side, larger. *Soft-shell Crabs* are deemed a great luxury; but they must not be kept over night, as the shells harden in twenty-four hours.

Boiled.—Crabs must be put on the fire with the water cold; if put into hot water, they have the extraordinary faculty of "shooting" their claws, which spoils them. Heat gradually, and boil half an hour. Then put them in a dish, face downwards, to dry.

Cold Dressed (or Deviled) Crab.—Open boiled crabs by raising the body from the shell without breaking the latter. Carefully remove the gills and other uneatable parts. Pick all the white meat from the claws and body; do the same with what is good of the inside, *i.e.*,



Dressed Crab.

the white and yellow curd and the coral. Chop these tolerably fine; mix them together, seasoning with oil, vinegar, mustard and pepper; then return them to the empty shell, which must previously have been cleaned, and send to the table garnished with sprigs of fresh parsley. Accompany it with rolls and butter.

Hot Dressed (or Deviled) Crab.—Pick and prepare the meat as before, adding bread-crumbs and pounded mace or grated nutmeg to the seasoning. Warm the whole gently in a sauce-pan; replace it in the crab-shell; sprinkle bread-crumbs over the top, and brown in a hot oven. Serve as soon as browned.

Plain.—Crab allowed to stand until it is cold, then opened and with its claws cracked, accompanied with a little fresh salad, is as agreeable and wholesome a way as any of serving it.

Salad.—Crabs make a perfect salad. Use Mayonnaise dressing. *See* SALAD.

Soft-Shell Crab.—Pull off the spongy substance from the sides and the sand-bags; wash carefully in cold water, and wipe dry. Put them into a pan of hot lard or butter, and fry them to a light, crisp brown. If lard is used, a little salt must be added; butter is salt enough. Serve hot, garnished with sprigs of green parsley. This is a delicious dish.

CRACKERS.—Rub six ounces of butter into two pounds of sifted flour; dissolve one teaspoonful of saleratus in a wineglassful of milk and strain it on the flour; add a teaspoonful of salt, and enough milk to enable you to roll the dough out. Beat it with a rolling-pin for half an hour, roll it out thin, cut into cakes with a tumbler, and bake in a moderately quick oven till crisp and hard.

CRACKNELS.—Beat up thirteen eggs with a quarter of a pound of powdered loaf sugar until they are quite light; then stir in three pounds of flour and a quarter of an ounce of sal-volatile reduced to a very fine powder. Mix these well together and roll the paste out

thin; cut out the cracknels with a wineglass or tumbler, throw them into boiling water for one or two minutes, then put them into cold water. After they have remained there three minutes take them out and bake in a rather quick oven. These are very delicate and eatable.

CRADLES.—The use of cradles for rocking babies to sleep is now very generally condemned by medical writers as injurious to the brain and paralyzing to the nervous system. A French physician goes so far as to declare it to be a source of idiocy and mental weakness. Even on grounds of convenience, however, their use should be abandoned. When once a child becomes accustomed to being rocked asleep he will never go to sleep without it, nor even lie down; whereas if children are dealt with properly, it is surprising how early they can be taught to lie down alone and go to sleep without waiting to be soothed. Rocking is only liked by nurses who find it convenient for putting babies to sleep when they ought, perhaps, to be carrying them about in the open air.

CRADLE. (Wine.)—A small basket, like that shown in the engraving, used in serving Burgundy, Latour, and other wines which throw down a precipitate. The precipitate or "dregs" being deposited on the side of the bottle, the wine can be poured off clear, which it is impossible to do when the bottle is shifted

Wine Cradle.

from a horizontal to an upright position, as in serving in the ordinary way. The wine should of course be placed in the cradle on the same side on which it lay in the bin, with as little agitation as possible. Hence it is well to have a uniform plan of storing bottles—with labels up or down.

CRAMP.—A violent and involuntary muscular contraction. It is, perhaps, most readily induced by cold, especially after prolonged exercise. This is probably the reason why it so often occurs in swimmers, and is supposed to account for a good many of the lives lost by drowning. The best remedy for Cramp is rubbing, especially with some stimulant application, such as spirit; but it is the rubbing which is most valuable. (*See* COLIC.)

CRANBERRY.—A well-known native fruit, growing wild in rich, moist low lands, and producing large crops without cultivation. The cultivated fruit, however, is the largest, most perfect, and of the best flavor. The season for the fresh fruit commences about the 1st of September and continues until April; but they can be dried in the sun and, in this condition, kept throughout the year. There are several varieties of cranberries, but only two at present extensively cultivated or found in the markets: these are the *cherry* and the *bell*, the former resembling the cherry in appearance and being considered the best; while the *bell* is oval in shape and somewhat the larger of the two. Cranberries make excellent pies, tarts, jellies, etc., and are unrivalled as an accompaniment for turkey and other poultry, and for game. They are considered astringent, and are thought to restore the appetite; and they are sometimes fermented into an intoxicating liquor, which is put into whiskey to disguise its peculiar flavor.

(*See* COMPOTES, JELLIES, PIES, PRESERVES, AND TARTS.)

Sauce (Cranberry.)—Choose light colored cranberries; look them over and take out all that are defective; wash them well, and put them over the fire more than covered with cold water; cover the saucepan and cook until the skins are tender, adding more water if necessary; add a pound of granulated sugar for every pound of cranberries, let them simmer ten or twelve minutes, then put them away in a wide mouthed crock and keep them covered.

Tea. (Cranberry.)—Select nice ripe cranberries; mash them, pour boiling water on them, and then strain off the water and sweeten it to taste; grate nutmeg over the top. This is a very pleasant drink for the sick.

CRANE.—A long-legged, long-necked, and long-billed bird, of the same species as the great blue heron. It sometimes, but very rarely, makes its appearance in our markets, though it is very abundant in the Southern and Western States from the middle of October to the middle of April, and is said to be well flavored and delicate when young. Cook like wild turkey.

CRAPE.—A light, transparent stuff, made of raw silk, gummed and twisted in the mill, and woven without crossing; when dyed black it is much used for mourning. Crapes are either crisped or smooth; the former, being double, expresses the deepest mourning, and it owes its peculiar appearance to a larger quantity of gum being added to the silk in dressing it. White crape is used in various dresses, but soils very easily. *China crape* is a beautiful variety, remarkably firm in texture and weighty in substance, which is usually dyed in various shades of pink and other gay colors, and used in rich dresses, shawls, etc.

Cleaning Crape.—When a drop of water falls on black crape it leaves a conspicuous white mark. To obliterate this, spread the crape on a table and place underneath the stain a piece of old black silk; with a large camel-hair brush dipped in common ink, go over the stain, and then wipe off the ink with a bit of old soft silk. It will dry immediately, and the stain will be seen no more.—*Old rusty black Italian crape* may be made to look as good as new by dipping it in skimmed milk and water (equal parts), with a bit of glue in it, made scalding hot; after dipping the crape, clap and

pull dry like muslin.—*China crape scarfs*, if the fabric be good, can be washed as frequently as may be required without injuring them. Make a strong lather of soap and water, suffer it to cool; when cold, or nearly so, wash the scarf quickly and thoroughly, and dip it immediately in cold hard water in which a little salt has been thrown (to preserve the colors); rinse, squeeze, and hang it out to dry in the open air, when the more rapidly it dries, the cleaner it will be.

CRASH.—A kind of coarse linen cloth, much used for towels, tablecloths, and the like. It comes of various qualities and kinds, some being figured and very closely woven, while others are coarse and flimsy.

CRAZINESS. (*See* INSANITY.)

CREAM.—To procure the largest amount of cream, the milk should be placed in very shallow pans, never more than three inches deep. Twelve hours in summer, and twenty-four in winter, will be sufficient time for the milk to stand for "creaming," though it may often be kept longer with advantage. Three quarts of really good milk will produce about a pint of cream. The cream should be removed with a perforated skimmer which has been dipped in cold water to prevent the cream, when thick, from adhering to it. It should be kept in a deep covered dish in a cool place, where the temperature is uniform. The consistency of cream increases by exposure to air. In three or four days it becomes so thick that the vessel which contains it may be inverted without spilling it. In eight or ten days more it becomes a soft solid, and its surface becomes tough; it has now no longer the flavor of cream, but has acquired that of cheese. This is the process for making *cream cheese*. (*See* CAKE and ICE CREAM.)

Artificial Cream.—(To eat with stewed fruit or tarts.) *Take:*–Fresh milk, 1 pt; sugar, 1 tablespoonful; eggs, yolks of 2.

Put a pint of new milk into a saucepan, add a tablespoonful of sugar, set it on a very low fire, or the hot iron plate of a cooking-stove; break into it the yolks of two eggs, and keep stirring, always one way, until it becomes as thick as ordinary cream. It must never reach the boiling point.

Coffee Cream.–*Take:*–Cream, 3 pts; ground coffee, 2 dessert-spoonfuls; eggs, yolks of 8.

Into three pints of cream, put two dessert-spoonfuls of ground coffee, and sweeten to taste. Boil it for half an hour; then let it stand to settle. Pour off the cream from the coffee-grounds, and stir into it the yolks of eight eggs; then simmer slowly until the whole is of the consistency of thick boiled custard. Serve in cups or glasses, like custard.

Lemon Cream.—*Take:*–Eggs, 3; lemons, 2 or 3; water, ¾ pt; loaf sugar, ½ lb.

Beat up well the whites of three eggs and the yolk of one, and stir them together; add the juice of two large lemons or three small ones, half a pint of water, and half a pound of loaf sugar, pounded fine. Mix these together thoroughly; set them over a slow fire, stirring constantly the same way; when warm, put in the rind of one lemon, peeled very thin. When it thickens well, remove the lemon peel, and take the cream off the fire. On no account must it be allowed to boil. Serve in custard-cups, or glasses.

Orange Cream.—Made same as *Lemon*.

Tea Cream.—*Take:*–Milk, 1 qt; green tea, 2 oz; cream, 1 qt; eggs, yolks of 6.

Pour a quart of boiling milk over two ounces of green tea in a teapot; put the lid on, and let it stand on a moderately hot part of the stove for a quarter of an hour. Then pour off the milk; mix it with a quart of good cream; stir in the yolks of six eggs, well beaten; sweeten to taste; and thicken over a very gentle fire, stirring all the time. Serve as before.

Whipped Cream.—Whip one quart of thick cream until it is stiff, taking care that it is not overdone, as it then would produce butter. When the cream is whipped, add one ounce of clarified gelatin, five ounces of powdered sugar, one wineglass of brandy, one tablespoonful of essence of vanilla, and the yolk of one egg. Carefully rub a mould with the oil of sweet almonds; pour the cream into it, and set it away on ice. When about to serve, turn it out on its dish, ornament the base with raspberries, strawberries, apricots, greengages, or peaches, or any bright, clear-colored fruit jellies. This cream is used for the purpose of garnishing Charlotte, Chantilly cake, meringues, etc.

CREAM CHEESE. (*See* CHEESE.)

CREAM OF TARTAR.—Cream of tartar is usually sold as a powder, but in this state is almost always adulterated with chalk, clay, gypsum, sand, or flour. It is best therefore to buy it in the crystalline form in which it is received from the French manufacturers; it can be pulverized at home in a mortar or piece of cloth. Keep it tightly corked in a glass jar or bottle.

Beverage (*cream of tartar*).—Pour a pint of boiling water on two teaspoonfuls of cream-tartar; sweeten to taste, and flavor with lemon peel. If this is too acid, add more boiling water. This is a very refreshing summer drink.

CRESS.—There are several species of this pleasantly flavored and aromatic herb the shoots of which are much used as a salad. The most common is the *water-cress*, which is found in abundance on the banks of fresh, clear streams, from March until May, and again from September to November. (*See* WATER CRESS.) Another kind is called *garden-cress*, or pepper grass, which is also eaten as a salad when young. It has a pleasant, refreshing, pungent taste, and is abundant during the spring months. A third species is called the *winter-cress;* this is a much larger plant, which grows about hedges, and the young leaves are used as a salad during the greater part of the year. The

flavor of this variety is very pungent and biting. Still another species is called *Indian-cress* or *nasturtium*. (*See* NASTURTIUM.)

CREWEL.—A kind of woollen yarn very slightly twisted. It comes in every color, and is used in several kinds of embroidery.

CRIMPING.—The process of producing a kind of plaiting or fluting on frills or ruffles. It is done by a machine with two grooved rollers, the lower of which is heated by a cylindrical piece of iron made red hot and inserted in it. The crimping is performed merely by putting the ruffles between the rollers when they have become hot, and turning the handle.

CROCKERY. (*See* EARTHEN-WARE.)

CROCUS.—The only kind of Crocus known to our gardens is the early blooming spring bulbs. These are hardy little plants. Plant them two inches deep, in a sunny spot, about the first of October, either by themselves or as a border. Enrich the soil with a liberal quantity of well-rotted cow manure and enough pure sand to make it rather loose. Just before the ground freezes up, a good covering of coarse manure and straw should be spread over the bed. In the spring rake off the straw, the bulbs will be found well up, the white stalks will soon turn green, and an abundance of bloom will follow. As winter approaches, cover them as before; they will bloom year after year.

For blooming in the house the crocus is only valuable as an early flower, its blooms being fugitive; a few, however, planted with other bulbs, produce a pretty effect. The soil for them should be one part loam, one part sand, and water should be sparingly given. As soon as the flowers fade, and the tips of the leaves begin to turn yellow, water should be gradually withheld, and the bulbs thus dried off. When dry, the earth should be carefully shaken off, and the dry bulb put away for the next autumn's planting. Some of the choicest varieties of the crocus are:—*Grootverst*, *Caroline* and *Queen Victoria*, white; *Scotch*, yellow; *David Rizzio*, blue; *Albion*, violet; *Grand Lilas*, lilac; *Sir Walter Scott*, variegated; and *Othello*, very dark purple.

CROQUETTES.—Take 10 ozs of chicken, freed of bone and skin, cut into small neat dice, with 2 ozs of mushrooms, and 2 ozs of ham cut in dice also. Place on the fire 1 tablespoonful of chopped shallot, 2 of chopped parsley, 1 blade of pounded mace, a saltspoonful of powdered thyme, white pepper and salt to taste. Fry these in a *sautoir* with 2 ozs of butter; then add 1½ ozs flour; stir a minute, then add 1 gill of broth; when it boils add the mince, and the yolks of 2 eggs; stir the mixture until it leaves the bottom and sides of the stewpan, then pour it on a well-oiled dish to cool. Form it into any shape desired; bread-crumb in the usual manner; fry them to a clear yellow in plenty of hot lard, pile them up on a napkin, and send them to the table at once.

Croquette of Sweetbreads.—Cut 10 ozs of sweetbread in small neat dice, 3 ozs of mushrooms, and 1 oz of red tongue in dice also; then incorporate with ¼ pint of reduced allemande sauce; season with nutmeg, white pepper, and salt; 1 tablespoonful essence of anchovies and a piece of chicken glaze. Bread-crumb them in the usual manner, and fry them in hot lard until they are of a light brown.

Rice.—Wipe clean, in a dry cloth, seven ounces of rice, put it into a clean stew-pan, and pour on it a quart of new milk; let it swell gently by the side of the fire, and stir it often that it may not stick to the pan, nor burn; when it is about half done, stir to it five ounces of powdered sugar, and six bitter almonds beaten extremely fine; the thin rind of half a fresh lemon may be added in the first instance. The rice must be simmered until it is soft, and very thick and dry; it should then be spread on a dish and left until cold, when it is to be rolled into small balls, which must be dipped into beaten egg, and then covered in every part with the finest bread-crumbs. When all are ready, fry them to a light brown in fresh butter, and dry them well before the fire, upon a sieve reversed and covered with a very soft cloth, or with a sheet of white blotting-paper. Pile them in a hot dish, and send them to the table quickly. (*See* LOBSTER.)

CROUP.—This most dreaded of all the diseases to which children are liable, requires immediate attention, for if neglected it may destroy life in one or two days. It commences with hoarseness and a short dry cough, which in a few hours becomes husky, and the cry hoarse; then the cough becomes peculiarly metallic, or "brassy," as it is called; the difficulty of breathing quickly increases, and soon becomes very distressing, the child seems to fight for breath and to require all its strength to force the air in and out of the chest; the face is flushed, and the voice and breathing make a peculiar crowing or cooing sound which it is impossible to describe, but which once heard will never be forgotten. Unless the disease is arrested, all these symptoms increase, the difficulty of breathing becomes greater and greater, and the child literally strangles to death. Before describing the treatment to be pursued, it may be well to explain that there are two varieties of croup, one of which is called *membranous* or true croup, and the other *spasmodic croup*. The spasmodic is of the most frequent occurrence, but fortunately is a very mild disease, and is seldom, very seldom, fatal. The membranous is of much more rare occurrence, but it is very often fatal. At first it is difficult to distinguish between them, and it is because of this that it is wise to seek the advice of a physician as soon as the attack commences; fortunately the spasmodic is rarely liable to develop into the membranous.

Treatment.—To save a child when taken with membranous croup, domestic remedies must not be relied on. *Night or day send at once for a doctor.* Till the doctor comes pro-

ceed in this way: Keep the child in a warm room, and give from half a teaspoonful to two teaspoonfuls of syrup of ipecac, according to the age of the child (half a teaspoonful to a child under a year old, a teaspoonful when between one and two, and two teaspoonfuls when over three); if this has no effect, repeat the dose every fifteen minutes, and give warm water to drink, until the child vomits freely; put the feet into hot water and mustard till the skin is quite red; and on the chest and well up to the throat place a large poultice made of two parts of oatmeal or bran and one part mustard, and keep it on till it reddens the skin (which will be but a short time in a young child). When the disease is spasmodic croup, the effect of the vomiting is usually to loosen the cough and to restore it to a more natural sound; when this is done the distress is removed. This variety of croup comes on most frequently in the night, the child awaking from its sleep to cough, or even coughing without waking. After vomiting has occurred and the cough ceased, the child often falls asleep at once, and may pass the rest of the night without further trouble. The disease, however, is very apt to recur at the same time on the succeeding night, and this should, if possible, be prevented. During the intervening day the child should be kept in a moderately warm room, and be given such medicine as the doctor may direct. The following old-fashioned remedy may do where nothing better can be procured: Mix in a teacup equal parts of molasses and good strong vinegar; let it stand where it will just keep warm, and give the child a teaspoonful as often as once every hour. If the breathing becomes heavier as night comes on, repeat the vomiting and poulticing as before.

A child that is subject to attacks of spasmodic croup should be guarded with unusual care from changes of the weather, and all those influences which are found by observation to precede the paroxysms; and the clothing should be carefully arranged to protect the chest, and in general to keep him more constantly warm. A child that has survived one attack of membranous croup, (a very rare object, because the disease is almost always fatal,) should be still more carefully guarded against all these influences. There is no advantage in excessive anxiety; yet it must be felt, under the circumstances, that the child's life hangs on a more slender thread than that which before sustained it. At all events, wash such children, and all children, once or twice daily, in cool or cold water, and rub them warm afterwards. You will thus harden them and render them less liable to be influenced by changes of temperature.

CRUMPETS.—I. *Take:*-Raised bread dough 3 teacupfuls; melted butter or cream, ½ teacupful; eggs, 3; milk.

Take three cups of raised bread dough and work into it, with the hand, half a teacupful of melted butter or rich cream, three eggs, and enough milk to make a thick batter. Turn it into a buttered bake-pan, let it stand until it is light, and then put it into the oven; it will bake in half an hour. Or the batter may be put into tins and cooked like muffins.

II. *Take:*–Same as before, with a teacupful of white sugar added.

Take three teacupfuls of raised dough, and work into it half a teacupful of melted butter; beat together three eggs and a teacupful of fine white sugar, and add them to the dough; put it into buttered pans and bake twenty minutes.

CUCUMBERS. — The cucumber, though usually regarded as a vegetable, is botanically one of the fruits, and belongs to the order of melons. Almost the only way in which cucumbers are used in this country is in salad, and when young, for making pickles; but in England, France, and Germany, they are dressed for the table in various ways, of which frying is one, and are said to be much more wholesome when thus prepared than when eaten raw. In cultivation, the cucumber requires a sunny situation, a deep and rich soil, and plenty of moisture. The seed should be planted as soon as the frost is out of the ground, in hills about two feet apart each way. They will grow with scarcely any care; though the young plants are subject to the depredations of numerous insect foes. The best way to prevent these is to cover the plants with boxes having gauze tops, which should be kept over them until the foliage is large and abundant. As an early vegetable, scarcely any other can be as successfully forced in the hot-bed; but the best sort should be selected for this purpose. Cucumbers begin to make their appearance from the South in April; in the Middle States they ripen about the middle of June, and so continue in the market until November, after which they are found in a cured state or pickled. (*See* PICKLES.)

Fried Cucumbers.—Pare and soak in cold water half an hour; then cut them lengthwise into very thick slices, throw them into ice water, and after they have remained ten minutes, take them out and wipe each slice dry with a cloth. Sprinkle with pepper and salt, roll in flour, and fry to a light brown in butter or lard. This is the best way of cooking cucumbers, and prepared thus they are far more wholesome than when raw.

Raw Cucumbers.—Select those in which the middle is yet crisp and hard, pare them well, and cut crosswise in very thin slices; dress with salt, pepper, and vinegar, and let them stand half an hour in a cold place before serving. A little olive or sweet oil may be added for those who like it, and a few slices of onions mingled with the cucumbers is a great improvement and renders them more digestible.

Stewed Cucumbers.—Pare the cucumbers, cut them into quarters lengthwise, take away the seeds, and stew them in butter until quite tender. On removing, sprinkle them with salt and pounded mace. A portion of the juice remaining in the sauce-pan may be thickened with flour and poured over them.

Stuffed Cucumbers. — This is a German

dish. Peel the cucumbers whole, scoop the seeds out carefully at the stalk end, and fill the cavity with a stuffing composed of minced cold veal, bread-crumbs in small quantity, eggs, and finely chopped lemon peel. Put butter in a stew-pan and when it is melted, lay the stuffed cucumber in it and add a little pepper, mace, and chopped onions; cover with good broth and stew gently till well done—say half to three quarters of an hour. Then take the cucumbers carefully out of the broth, and arrange them on a dish. Reduce and thicken the broth by boiling down; strain it, and pour while very hot over the cucumbers.

CULLENDER. (*See* COLANDER.)

CUMMIN SEED.—The fruit or seed of the cummin plant, cultivated in the East from the earliest times. They have a bitter, aromatic taste, and a peculiar fragrance, and though seldom used in this country, enter largely into the composition of French *ragouts* and other dishes. They are also put into liquors.

CUPHEA.—The most desirable plant of this family for culture is the little Mexican *b. ignea*, which blooms very profusely and for a long time. Plant the seed in June or July in a soil of about three parts loam and one each of sand and manure; it grows about a foot high and is always in bloom. In autumn the plants may be potted and removed to the house, where, if watered freely, they will be covered all winter with a profusion of bright scarlet tubes, tipped with a ring of black and white.

CURACOA.—A *liqueur* first made in the island of that name. A fair quality can be made at home by taking the rind of six oranges, peeling off as thin as possible, without retaining any of the white skin. Put it into a glass jar with a cover closing tight; pour over it a quart each of best brandy and rectified spirits of wine. Let it steep in a warm place for a fortnight; then strain the liquor carefully away from the orange peel. Melt two pounds of loaf sugar into a wineglassful of water, and when nearly cold, pour it into the liquor, stirring well. Then bottle it off, and use as required. (*See* LIQUEURS.)

CURD. (*See* CHEESE.)

CURRANT.—There are several varieties of this well-known garden fruit, but the chief division is into *red* and *black* currants. The latter is of a different species from the common currant, not having the same flavor, but a flat and strong taste, and is considered best for jam, jelly, etc., especially for the sick. The cultivation of the currant is extremely easy, as it will grow in almost any garden soil, in the open sun or in the shade of fences, when the fruit is longer in ripening but still sure. In planting, select well-ripened, straight, short shoots, removing all the buds or eyes from the lower portions which are to be inserted in the soil, which will prevent future "suckers" from springing up around the stem. After the stem has been trimmed upright for two or three feet, a thin spreading head should be carefully grown by trimming off all superfluous wood as it makes its appearance. About mid-summer the ends of the fruit-bearing branches should be pinched off, in order to allow the strength of the plant to go into fruit. But the currant will reward the least degree of attention that can be given to it, and is on this account one of the most desirable of the smaller garden fruits. Among the best varieties are *Cherry*, *Red*, *White-Dutch*, and *White-Grape*. The green currants are much sought after, just before they begin to color or grow red, for pies, tarts, etc. They are generally in market about the first of June; in July they ripen, and will then remain on the bushes until September, especially if covered. (*See* CAKE, CUSTARD, JAM, JELLY, PIES, PRESERVES, and TARTS.)

Dried Currants are imported from abroad, and are sold in grocery stores and occasionally in the markets. The best come from the Levant and the Grecian islands, and the new-dried fruit arrives here in December and January.

Raw. — Select nice fresh currants and stem them carefully; sprinkle powdered sugar liberally over the bottom of a dish, put in a thick layer of currants, sprinkle in more sugar, add another layer of currants, and continue until the desired quantity is prepared. Set on ice until time to serve. Currants prepared in this way are one of the most cooling and refreshing of fruits.

Stewed. (*See* COMPOTES.)

Wine (Currant).—I. *Take:*–Currants; water; sugar; brandy; alum.

Select ripe currants, stew them, mash thoroughly, and strain. To one gallon of the juice add two of water, and to each gallon of this mixture add three and a quarter pounds of sugar, a gill of brandy, and a quarter of an ounce of powdered alum; put the whole into a clean cask to ferment. In March draw off, add another gill of brandy to each gallon, and bottle. It will be fit for use in six months, but improves with age.

II. *Take:*–Currants; sugar; cream-tartar.

To each gallon of juice of white currants, add three and a half pounds of sugar; stir them well together, let the liquor stand twelve hours, and then pour it into a clean wine-cask, adding six ounces of cream-tartar (*powdered*) to each ten gallons, and mixing it well. Let it ferment three months, covering the bung-hole with a tile; then bung down closely, and leave the spile-peg rather loose, examining occasionally for six months, when it may be bottled. This will make a clear white wine of delicious flavor.

III. *Take:*–Honey, 8 lbs; boiling water, 15 galls; currants, 8 lbs; sugar; eggs and cream-tartar.

Dissolve eight pounds of honey in 15 gallons of boiling water; strain and add the juice of eight pounds of red or white currants. Ferment for twenty-four hours, and then to every gallon of the liquor add a pound of sugar. Clarify with whites of eggs and cream-tartar (*an ounce of the latter with the whites of two eggs*) and bottle. This is the French way.

IV. (Black Currants). — *Take:*–Currants; loaf sugar; cream-tartar; yeast.

To a gallon of water allow a gallon of picked currants; squeeze the currants lightly, and then put both into a boiler, boil ten minutes, and strain off the liquor. Press the currants again, adding water to make up for loss by boiling, and strain it into the first liquor. Add to each gallon of the liquor two and a half pounds of loaf sugar and one ounce of cream-tartar; bring the whole up to a temperature of 85°, and add a quarter of a pint of fresh yeast to every five gallons. Put it in a cask, where the longer it is kept the better it will be.

CURRY.—Almost any kind of meat can be made into curry, though chicken and veal are the best. Cut any fowl, rabbit, or game into joints suitable for serving; meat or fish into pieces. Put four ounces of butter into a stew-pan; when it is melted, put in the meat or fish, with a couple of sliced onions, and fry over a brisk fire till the meat is nicely browned; then stir in half a pint of broth, and let all simmer for twenty minutes. Put into a tea-cup one tablespoonful of curry-powder, the same of flour, and a teaspoonful of salt; mix these together with a little cold water, and put them into the stew-pan, shaking all well together until the curry boils. Then take it off the fire, let it simmer by the side for twenty minutes longer, add a tablespoonful of melted butter and the juice of half a lemon, and give a final stir up. Serve hot, accompanied by boiled rice.

In all curries the quantity of curry-powder used must depend first upon its age and strength; and secondly, on the degree of spiciness desired. Many persons who are fond of curry find it disagree with them when too much of the powder is used. (*See* CURRY-POWDER.)

Dry Curry.—Skin and cut down a fowl into small joints, or two pounds of lean mutton into small thick cutlets; rub them in a mixture of two tablepoonfuls of curry-powder, two of flour, and one teaspoonful of salt, till no more will adhere to them. Melt a heaping tablespoonful of butter in a stew-pan, and while it is boiling hot, put in the meat and brown it well and equally, without allowing a morsel to be scorched; the pan should be shaken vigorously every minute or two, and the meat in it turned frequently. When the meat is done, lift it out, and throw into the stew-pan two or three layers of onions finely minced, and four or five eschalots, when these last are liked; add a morsel of butter, if needful, and fry them until they begin to soften; then add a quarter of a pint of gravy, broth, or boiling water, and a large acid apple, or two moderate sized ones, with the hearts of two or three lettuces, or of one hard cabbage, cut very fine (*tomatoes or cucumbers, freed from their seed, can be substituted for these when in season*). Stew the whole slowly until it resembles a thick pulp, adding broth or water should it become too dry; put in the meat and simmer the whole gently from three-quarters of an hour to an hour. Serve hot.

Egg Curry.—Boil six or eight fresh eggs quite hard, as for salad, and put them aside until they are cold. Mix together from two to three ounces of butter and three to four dessertspoonfuls of curry-powder; shake them in a stew-pan over a moderate fire for several minutes, then throw in a couple of onions finely minced, and fry them until they are tolerably soft; pour to them by degrees from half to three-quarters of a pint of broth or gravy, and stew them slowly until they are reduced to a pulp; mix smoothly a teaspoonful of cream with two teaspoonfuls of wheat or rice flour, stir them into the curry, and simmer the whole until the raw taste of the thickening is gone. Cut the eggs into half inch slices, heat them quite through in the curry without boiling them, and serve as hot as possible.

CURRY-POWDER.—An East Indian powder much used in cooking. The prepared curry-powder can be bought in the shops, but is extensively adulterated with very pernicious ingredients, red lead being frequently detected in it. The quantity taken in curry-powder at a meal has been known to produce a serious effect; and for this reason it is a safer as well as more economical plan to make the powder at home. *Take* four ounces each of turmeric, coriander seed, and black pepper; three ounces of fenugreek seed; two ounces of ginger; one ounce each of cummin seed and ground rice; half an ounce each of cardamons and cayenne pepper. Pound them to a fine powder, put in a bottle, and keep tightly corked.

CURTAINS.—Window-curtains should be selected in accordance with the general principles of taste laid down in the article on DECORATION. According to their several purposes, and the nature of the apartments, the quality of the materials and the manner of hanging them must be determined. In this country particularly, window-curtains are necessary to exclude the cold air which presses in from the windows in winter when the fires are burning, however closely the sashes may be fitted. But there is another cause for this which is not generally thought of. The warm air in a room which always occupies the upper part near the ceiling, coming into contact with the glass, is cooled by it, and, descending immediately in consequence, diffuses itself through the lower part of the room and is felt as a cold current coming from the windows though no outside air may actually have entered them. Curtains check this partly by preventing the warm air from reaching the glass, and partly by turning the current sideways.

But though curtains help to keep air out, heavy ones may exclude it too much and also keep bad air in. They should therefore be hung on rings sliding on rods so that they can be drawn entirely away from the window. For the same reason, lambrequins are very objectionable, more so even than curtains as they have no opening in the centre, and are fixed obstacles to ventilating the upper part of the room where the air is most heated. As to taste, too, this arrangement is certainly inferior to others. The rod and rings are more "con-

structive" than the cornice, and the general effect conforms to the purpose in view. It is well that curtains are now so seldom used for shutting ventilation away from beds. In low-priced materials curtains are apt to be cheaper than lambrequins because the latter require more fringe.

CUSTARDS.—The secret of preparing good custards lies in mixing the ingredients thoroughly together and cooking them over a *slow* fire; without attention to the latter point especially it is impossible that custards should be delicate and smooth. To prevent boiling and scorching the milk, the sauce-pan should be placed over boiling water. A very small pinch of salt may be used to a quart of milk; without it custard is likely to have a somewhat flat taste.

Almond Custard.—*Take:*—Milk, 1 qt; eggs, 6; white sugar, 1 teacupful; almonds, ½ lb; rose-water, 4 tablespoonfuls; powdered sugar, ½ teacupful; extract of bitter almond, teaspoonful.

Take a quart of milk (*half cream is better*), heat it to boiling, and add the beaten yolks of six eggs, and whites of four; a teacupful of white sugar; and half a pound of almonds, blanched and pounded to a paste with four tablespoonfuls of rose-water. Put it over boiling water and stir constantly till it thickens; then remove and when nearly cold stir up and pour into cups. Make a méringue with the whites of four eggs and half a teacupful of powdered sugar, flavored with one teaspoonful of extract of bitter almond, and heap upon each cup.

Apple Custard.—*Take:*—Apples, 6 or 7; eggs, 10; milk, 3½ pints.

Pare six or seven very acid apples, core them, and stew in about a teacupful of water until they begin to feel soft; then put them in a pudding-dish and sugar them well. Beat up ten eggs with eight ounces of sugar, mix it with three and a half pints of milk, pour it over the apples, and bake about thirty minutes.

Arrowroot Custard.—*Take:*—Arrowroot 2 tablespoonfuls; milk, 1 qt; eggs, 3.

Mix two tablespoonfuls of arrowroot in a teacupful of cold milk, and add three eggs well beaten; boil a quart of milk and pour it while boiling upon the arrowroot and eggs, stirring continually; then put it into a pitcher, set the pitcher into boiling water, and let it boil until it thickens. When done turn it into custard cups and set away to cool.

Baked Custard.—I. *Take:*—Fresh milk 1 qt; eggs, 8; sugar, 5 to 8 oz; salt; nutmeg, or lemon rind.

Pour a quart of boiling milk on eight well beaten eggs; strain the mixture through a fine sieve, and sweeten with from five to eight ounces of sugar according to taste, adding a pinch of salt; pour the custard into a deep dish, grate nutmeg or lemon rind over the top, and bake it in a very *slow* oven from twenty to thirty minutes, or longer should it not be firm in the centre. A well baked custard should be quite smooth when cut, and there should be no whey in the dish.

II. (Richer).—*Take:*–Fresh milk, 1½ pts; loaf sugar, 6 oz; salt; lemon, rind of 1; eggs, 10; cream, ½ pt; brandy, 3 or 4 teaspoonfuls.

Boil together gently for five minutes a pint and a half of new milk, a pinch of salt, six ounces of loaf sugar, and the very thin rind of a lemon; stir these while boiling hot, but very gradually, into the well beaten yolks of ten eggs and the whites of four; strain the mixture, and add to it half a pint of rich cream. Let it cool, and then flavor it with three or four spoonfuls of brandy; pour into small custard-cups, and bake in a slow oven from ten to twelve minutes.

Chocolate Custard.—*Take:*–Chocolate, 1½ oz; milk, one pt; flavored with lemon peel or vanilla; sugar, 2 oz; eggs, 5.

Dissolve an ounce and a half of the best chocolate in a wineglassful of warm water, and then boil it until it is perfectly smooth; mix with it a pint of milk flavored strongly with lemon peel or vanilla, add two ounces of fine sugar, and when the whole boils, stir it into five well beaten eggs which have been strained. Put the custard into a jar or pitcher, set it into a pan of boiling water, and stir constantly until it is thick. When nearly cold, turn it into cups or a dish. This, as well as other custards, is very much finer when made with the yolks only of the eggs, of which the number must then be increased. Two ounces of chocolate, a pint of milk, half a pint of cream, two or three ounces of sugar, and the yolks of eight eggs, will make a very superior custard of this kind.

Coffee Custard.—*Take:*–Coffee (strong), 1 pt; cream, 1 pt; eggs, 8; white sugar, 1½ teacupfuls.

Make some strong fresh coffee, mix a pint of it with a pint of cream, put it into a sauce-pan and let it boil up once. Beat up eight eggs with a teacupful and a half of white sugar; turn the coffee and cream boiling hot into this, stirring all the while. Put the whole into a jar or pitcher, set into boiling water, and stir it constantly until it thickens. Pour into custard-cups and set aside to cool.

Cold custard.—*Take:*–Almonds, 2 oz; rose-water, orange-water, or vanilla, 2 teaspoonfuls; loaf sugar, 2 oz; eggs, 8; milk and cream (mixed), 1 pt.

Pound to a fine paste two ounces of blanched almonds, with two teaspoonfuls of rose or orange water, or vanilla, and two ounces of loaf sugar; moisten with a little milk, and throw in a few grains of salt. When it becomes of the consistency of thick cream, take it out and beat it up with the yolks of eight eggs; then gradually add a pint of half milk and cream. Set this over a very slow fire, stirring continually, until it thickens; then remove, pour it into glasses, and set it away to cool. Half a dozen bitter almonds and a couple of bay-leaves may be used for flavoring instead of rose-water or vanilla.

Currant Custard.—*Take:*–Currant-juice, 1

pt; sugar, 10 oz; eggs, 8; cream, ½ pt; lemon-juice, 2 tablespoonfuls.

Mash the currants, strain off the juice, and boil in a pint of it ten ounces of sugar for three minutes; take off the scum and pour the boiling juice on eight well-beaten eggs. Thicken the custard in a jar or pitcher set into a pan of boiling water, pour it out, and stir until nearly cold; then add to it by degrees half a pint of cream, and two tablespoonfuls of strained lemon-juice. When the currants are very ripe omit one ounce of the sugar.

Strawberries, cherries, red or white raspberries, or a mixture of any of these fruits, may be used instead of currants in this receipt.

French Custard.—*Take:*–Fresh milk, 1 qt; loaf sugar; peach or vanilla; eggs, 8; marmalade, or jelly.

Take a quart of new milk, sweeten it to taste with loaf sugar, flavor it with peach or vanilla, and put it into a sauce-pan to boil; beat the whites of eight eggs to a stiff froth, and when the milk boils put in the froth in spoonfuls until it hardens a little; then dip them out carefully and lay them on a dish. When all the whites have been cooked, beat up the yolks and stir them into the boiling milk till it thickens; turn this over the whites, and ornament with bits of marmalade or colored jelly.

Fruit Custard.—*Take:*–Juice of stewed fruit, 1 qt; eggs, 8; milk, 3 pts; vanilla or essence.

Stew any kind of fruit almost to a jelly, strain off the juice, and when cool sweeten it. To a quart of this juice, add eight eggs well beaten and stirred into three pints of new milk; flavor with spice or essences, and either boil in a jar set in boiling water till it thickens, or bake in cups or a deep dish for twenty minutes or half an hour. Eaten either hot or cold.

Moulded Custard.—*Take:*–Eggs, 4; flour; milk; loaf sugar; essence.

Mix the yolks of four eggs with enough flour to make a rather stiff paste, then stir in the milk until it is of the consistency of cream; sweeten to taste with loaf sugar, flavor with any kind of essence, and mix in the whites of the four eggs beaten to a froth; butter a mould well, fill it with the mixture till about two-thirds full; and bake in a slow oven twenty minutes or half an hour. Serve as soon as done; if intended to be served cold, omit the whites of the eggs.

Quince Custard.—Made same as *Apple.*

Rice Custard.—*Take:*–Fresh milk, 3 pts; flavored with lemon peel, mace, or cinnamon; rice-flour, 1 tablespoonful; eggs, yolks of 2; brandy, 2 tablespoonfuls.

Boil three pints of new milk with enough lemon peel, mace, or cinnamon to flavor it rather strongly, and sweeten it to taste; rub a large tablespoonful of rice-flour into half a cupful of cold milk, and mix with it the well-beaten yolks of two eggs; dip out a cupful of the boiling milk, mix it with the cold, and then pour the whole in the boiling milk. Stir the custard continually until it thickens; then pour into a dish, stir until nearly cold, and add two tablespoonfuls of brandy. Part cream will make this a nice custard.

Tapioca Custard.—*Take:*–Milk, 1 qt; tapioca, 3 tablespoonfuls; eggs 3; sugar, 1 coffee-cupful.

Boil a quart of milk, and while boiling add three tablespoonfuls of tapioca in a pint of cold water, in which it should have been soaking for several hours previously, and a pinch of salt; stir until it becomes boiling hot, and then pour it gradually upon the yolks of three eggs that have been beaten up with a coffee-cupful of sugar. Put it in a jar or pitcher, set in boiling water, and boil, stirring all the time until it thickens. Then turn into a dish and stir in gradually the whites of the eggs beaten to a stiff froth. Flavor to taste, and serve cold.

Wine Cream Custard.—*Take:*–Cream, 1 pt; powdered sugar; wine; rose-water, or essence.

Take a pint of rich cream, sweeten it with powdered sugar, heat it over the fire, and stir in wine until it curdles; then flavor with rose-water or other essence, and turn it into cups. This may be eaten either hot or cold; but all custards if served hot should be *very* hot.

CUTS.—As this form of accident is so constantly occurring in families, a supply of linen and long bandages, about two inches wide, some small soft sponges, needles and thread, and a roll of *adhesive plaster*, should always be kept where they can be got at immediately in case of emergency. In all cuts, before you begin to dress them, notice the way they bleed. If the blood is dark and flows regularly it may generally be stanched by an application of cold water and pressure; but if it is of a bright scarlet color, and spurts out in jets, an artery is cut (*see* BLEEDING), and, however small the wound, send for a doctor *at once.* If the cut has smooth clear edges, wash the part well with cold water, dry the skin, bring the edges of the wound together, and keep them there with strips of adhesive plaster. The plaster must be applied in strips of length and breadth proportioned to the size of the wound. Having first softened the plaster surface, one end of the strip should be closely applied to the sound skin, at right angles to the cut, and at some distance from its edge; then the wound being closed by pressing together with the fingers, carry the strip along the line of contact and fix it to the sound skin at a like distance on the other side of the cut. Each strip so applied should be parallel with the preceding ones, and when a sufficient number have been put on, place raw lint over the cut, and secure the whole with a bandage. In removing or changing the plasters, the ends should first be raised, and both lifted up from the outside towards the centre, so that no dragging may take place at the injured part. If the cut is ragged with loss of skin, it will not in all cases be possible to unite its edges, and the best thing then to do is to apply pieces of folded linen dipped in cold water.

If an artery be cut, which can be told as

above explained, by the blood being scarlet-colored and coming out in jets, the bleeding should be arrested as soon as possible. Bleeding from small arteries is usually best controlled by bringing the cut surfaces together. A vessel of larger size may require tying. The doctor should therefore be summoned and meantime an attempt made to arrest the bleeding by compressing the tissues in which the artery lies imbedded. In this case, and in all cases of bad wounds that bleed much, *tie a tight bandage near and above the wound*, insert a stick in the bandage, and twist as tight as can be borne, or until the flow of blood perceptibly lessens. Cuts on the head cannot be dressed with plaster without shaving a large space, and in small injuries this is unnecessary. Cut the hair very close just around the wound; and, after washing with cold water, apply a fold or two of wet linen and leave it there. If, however, it becomes painful, and there is headache and the face flushed, call in the doctor.

CUTLERY. (*See* KNIVES, FORKS, RAZORS, and SCISSORS.)

CUTLET. (*See* VEAL.)

CUTTING AND FITTING.—The object of this article is to explain the general principles on which all garments are cut and fitted; and to do this will be an easier matter than might at first be believed. Although fashion incessantly varies the forms and names of garments, these changes in reality are and must be but trivial. The general outlines will always remain the same, and these general outlines, as we shall now proceed to show, are obtained by a series of measurements, exact, simple, and applicable to any garment and to any figure.

These measurements might, indeed, for the perfect figure, be reduced to a single one, whence the others might be derived in accordance with the following rules: The size of the wrist is one half that of the neck; that of the neck is equal to the length of the front of the waist, and is half the circumference of the waist; the size of the waist is equal to the inside length of the arm; the length of the arm is equal to the breadth across the breast; two-thirds of the size of the waist equals the length and breadth of the back; one third of the size of the waist equals the height under the arm, etc. But in reality there exist very few figures exactly conformed to these rules, and patterns prepared for the ideal figure seldom prove satisfactory till they have undergone very considerable modifications. In accordance with the system of measurement we shall now explain, every woman may cut not her own garments from given patterns, but her own patterns, suited expressly to herself, and fitting her with a grace and perfection attainable in no other way except by the work of a first-class dress-maker.

Fig. 1.

Fig 2.

In taking these measurements a tape measure is required, and a large card, upon which should be copied the specifications given below in small capitals, afterwards filling out the list by writing down each measurement as it is taken.

I.—LENGTH OF SKIRT, BACK (Fig. 1). Measure from the waist at the middle *b*, to touch the floor, or longer as desired, allowing an extra half inch at top and bottom.

II.—LENGTH OF SKIRT, FRONT (Fig. 2). Measure from the waist in front *b*, to touch the floor, making the same allowance at top and bottom as for the back.

III.—LENGTH OF WAIST IN FRONT (Fig. 2). Place one end of the measure at the base of the neck *a*, and carry it down to the waist *b*.

IV.—BREADTH OF THE CHEST. Place one end of the measure at the right side of the chest, close to the arm, at the point *d*, and carry it, not too tightly drawn, across to the left arm *e*.

V.—LENGTH UNDER THE ARM. Place the measure under the arm at the point *e* (Fig. 1), and carry it down to the waist *c*.

VI.—SIZE OF THE WAIST. Bring the tape around the waist evenly, neither tight nor loose, and reduce the measure by a scant half-inch, because the measurement is taken outside the clothes.

VII.—FIRST HEIGHT OF SHOULDER. (For the height of the shoulders two measurements must be taken to allow for the slope.) Place one end of the measure at the middle of the waist *b*. (Fig. 2), carry it to the point *f* at the neck, and thence down the back to the middle point *b* (Fig. 1).

VIII.—SECOND HEIGHT OF SHOULDER. Place one end of the measure at the point *c* (Fig. 2), carry it straight up over the shoulder at the point *g*, and down straight to the point *c* on the waist (Fig. 1).

IX.—ARM-SIZE. Slip the measure under the arm, and meet it, without drawing it tightly, on the shoulder at the point *h* (Fig. 1).

X.—LENGTH OF ARM. The measure is placed under the arm *e* (Fig. 2), and carried to the wrist *i*. (The outside measure of the arm is useless.)

XI.—SIZE OF WRIST. This measure is taken loosely.

XII.—LENGTH OF WAIST, BACK. This measure is taken from the nape of the neck *a* (Fig. 1), to the waist at the point *b*.

XIII.—BREADTH OF BACK. This measure is taken across the shoulder blades from *e* to *d* (Fig. 1), and the tape should be drawn tightly.

XIV.—LENGTH OF SHOULDER. Place one end of the measure at the base of the neck *f* (Fig. 1), carry it down the slope of the shoulder to *g*, and an inch further upon the arm.

XV.—SIZE OF NECK. We draw the measure very loosely around the neck and meet it. For the neck we mark two measures in the following manner: We fold the measure in three parts and mark the number of inches in a third, and also, in a sixth. The use of these two minor measurements will be explained elsewhere. (*See* WAISTS.)

We have now given the entire list of measurements necessary for making the pattern of a high-necked plain waist, which is the basis from which all other garments are designed. To this list we may add one more measurement, used in capes and some few other garments: the BREADTH OF SHOULDERS (XVI.), that is to say, a measure taken around the whole figure including the arms, just below the shoulder-joint.*

CYCLAMEN.—A pretty little flower, much cultivated in England, but too little known in this country. It is especially adapted for window culture, and will give more flowers with less trouble, and occupying less space, than almost any other member of the floral kingdom. It can be grown easily from seed, but the seedlings do not bloom until the third year, and it is best to buy the bulbs, which can be had of any florist at from fifty cents to one dollar each for the common varieties. Plant them about the latter part of November in a pot filled with rich loam, with a sprinkling of white sand; a handful of charcoal broken into bits and thoroughly mixed with the soil will increase the size and brilliancy of the flowers. Good drainage is indispensable. Place the crown of the bulb just above the surface of the soil. Till the leaves are well grown, keep the plants where the sun will not fall directly upon them; when the buds begin to rise on the foot stalks, remove to a sunny shelf, and they will soon show bloom. By shading, the duration of the flowers may be prolonged. When the bloom is past, gradually withhold water; the leaves will turn yellow, and the plants should be kept dry, in a state of rest, all summer. Sometimes it is difficult to prevent the bulbs from shrivelling up during the summer; to prevent this, the bulbs may be buried in the open ground until the middle of September, when they are found fresh, and in good condition for a start. There is one risk, however, in this latter method: mice are very fond of the bulbs and sometimes commit great havoc among them.

The best of the common varieties are: *C. Persicum*, white tipped with purple; *C. Persicum Album*, pure white; and *C. Punctatum*, resembling Persicum. These flower from January to March. There are several varieties which bloom from October to January; the best are: *C. Europœum*, pinkish purple; *C. Europœum Album*, pure white; and *C. Hederafolium*, rosy purple, and a very large splendid variety.

CYPRESS VINE. — One of the most delicate and beautiful of all the creepers. It is an annual, dying down each year; but it produces seed plentifully, and these may be put away in paper during the winter. In planting, select some spot near a fence, arbor, or trellis, pulverize the soil, and rake it smooth, soak the seed for several hours in warm water, and then sow them over the prepared ground,

*In the preparation of the series of articles on the making of garments of various descriptions, we have depended principally upon a little book recently published in Paris, entitled "*Méthode de Coupe*." It is written by a woman, who has tested with her own hands the accuracy of every pattern and every direction she gives; and it has been so well received in France, that land universally recognized as the arbiter of good taste in dress, that it has even been introduced as a text book into schools for girls in Paris, Strasburg, and other large cities.

pressing them in with the open hand. The green shoots will make their appearance in a few days, and from the time they are a foot high the vines should be carefully trained, and given plenty of water. No vine is more ornamental than the Cypress for training over the windows or porticoes of houses; for this purpose the seed should be sown thickly and numerous shoots carried up, as the foliage is rather slight.

D

DACE.—A fish of the carp genus, usually found in clear running streams, and of a bright silvery color. It is considered a light, nutritious food, but is full of bones, and rarely, except in the case of the *silver dace* which is abundant in the great lakes, weighs as much as a pound. Dace are not often offered in the markets, being used by the fishermen as bait, but they are the usual reward of amateur angling in the interior. The only way of preparing them for the table, is to roll them in bread-crumbs or Indian meal and fry them crisp in hot fat. The smaller kinds may be eaten bones and all, and have a very delicate and pleasant flavor.

DAFFODIL. (*See* NARCISSUS.)

DAHLIA.—Twenty years ago the growing of Dahlias amounted almost to a mania in England and the United States, but of late they have been nearly superseded by the gladiolus, hollyhock, and similar plants. They are rank, coarse, ill smelling flowers, too stiff for grace and unpleasant to handle, whose only recommendation is the extreme ease with which they can be cultivated. They will grow in almost any kind of soil excepting wet, heavy clay; and require scarcely more attention than potatoes. For the finest blooms a clear, open location, well exposed to the sun is best. Dahlias may be grown from seeds, or the tubers may be bought from florists. In the former case, sow the seed early in the spring, in shallow boxes in a window or hot bed, in a rich, light soil, with a good sprinkling of sand; as soon as the third and fourth leaves are developed, plant them in two inch pots, or in boxes three inches apart, and when the frost is entirely out of the ground they may be transferred to the garden. If the finest blooms are desired, the side branches should all be pinched off and only three or four of the strongest shoots allowed to grow; and on these the buds must be thinned out, leaving but three or four to come to perfection. Soapsuds make an excellent fertilizer for dahlias, and it is well to give the roots a thorough drenching with it at least once a week.

The dwarf or *Pompone Dahlias* are much prettier than the larger kind, and are very lovely for bouquets and vases. They grow about eighteen inches to two feet high, and the flowers are of a globular shape with each petal perfectly cupped and tinted. In cultivation treat them exactly like other dahlias.

To keep dahlias through the winter, dig up the tubers or bulbs just before the ground freezes, and place them in a dry outhouse for a day or two to dry off. Don't break the tubers apart, but cut the stem down to within a few inches of them and use it as a handle by which to lift them; all the flowering stems of another season are situated on or near the point of junction between the tubers and the stem. When the tubers are so dry that the soil will all shake off, pack them in barrels or boxes and fill up with perfectly dry sand; if the sand is at all damp they will rot. After they are packed, put them in a dry frost-proof cellar, and they will come out in March or April fresh and vigorous. In planting them, it is considered best to set out the cluster of tubers, and after the shoots have sprouted two or three inches, to separate them, leaving two shoots to a tuber.

When planted out in the bed, put the root at least three inches under ground and water carefully, shading from the sun for two or three days. A stake must be inserted close by the stem when the tuber is planted, and as the shoots advance tie them to it with soft yarn; if driven in after the plant is growing it may injure the roots.

There are nearly two thousand varieties of the dahlia. Among the choicest are *Alba Multiflora*, pure white; *Ali Baba*, deep scarlet; *Amazons*, scarlet margins with yellow centre; *America*, white ground striped and splashed with rose crimson; *Antiope*, buff, shaded with carmine; *Colossus*, large yellow; *Carnation*, buff, striped with crimson and lilac; *Duchess of Cambridge*, pink, edged with crimson; *Gem*, scarlet, tipped with white; *Glowing Coal*, crimson-scarlet; *Hebe*, white, edged with yellow and tipped with red; *Koh-i-noor*, canary yellow; *Murillo*, salmon, shaded with lilac and carmine; *Striata*, lilac, striped with maroon; *Tiger*, maroon-purple.

Of *Pompone* Dahlias the choicest are: *Alba Floribunda nana*, pure white; *Arndt*, magenta, with brown stripes and spots; *Black Diamond*, maroon; *Exquisite*, golden yellow, tipped with scarlet; *Little Herman*, cherry pink, tipped with white; *Little Kate*, dark crimson; *Little Willie*, deep pink; *Rachel*, salmon, tipped with crimson; and *Rose of God*, finest vermilion.

DAIRY.—The dairy-house for the sake of convenience may be near the cow-house; but care should be taken that it is not exposed to the effluvia of the cow-house or stables, as milk is a ready absorbent, and any bad odor will taint both the milk and the butter made from it. The dairy should also be so situated that it will be sheltered from the sun and wind as much as possible, an equable temperature

being very important. In the summer time, should the temperature rise too high, it may easily be reduced by suspending a piece of ice at a considerable distance from the floor, or by hanging up a wet sheet where the air will strike upon it. If, during the winter, the cold should become too great, and the room is not provided with a stove, a barrel of hot water, closely stopped, or a few hot bricks placed on the floor, will prevent any bad effects. On no account should a charcoal stove be used, as it is certain to impart a bad taste to the milk. The setting of milk in deep cans in cool water obviates much of the difficulty connected with the question of temperature, both in summer and in winter. Abundance of pure water is essential to a dairy; if a well or spring can be had adjoining, it is desirable; if not, there should be a cistern conveniently placed and kept well supplied; likewise proper drains should be made for carrying off the water. Dampness does no harm, however, if the dairy is kept sweet and clean.

The utensils of a Dairy comprise pails, sieves, pans, creaming dishes, churns, cheese-vats, ladders, and presses, with a thermometer which should be suspended in a prominent place. These utensils are often made of wood, which is apt to acquire a musty smell; to prevent this the vessels should be scoured and scalded every time they are used, as the smallest drop of milk in them, or the least taint of acidity or mustiness, may spoil the next milking. Earthen-ware vessels, when properly glazed, or glass utensils, are least troublesome; but the lead, brass, copper, and tin vessels, although so generally used, are objectionable because the acid contained in the milk that has long been exposed to the air combines with these metals and gives the milk a disagreeable flavor. Cast-iron vessels are equally objectionable, and for a similar reason. The common brown earthen-ware pan, glazed on the inside, has been found to preserve the milk better and throw up more cream than any other; iron pans, enamelled in the interior, also throw up cream very well; and slate vessels would be unequalled but for their liability to come uncemented at the joints. Pans made of zinc are sometimes used, but are open to the same objection as other metals. Earthen-ware vessels are somewhat easier to keep clean. Or if metal vessels are kept clean they will do also.

Other utensils which it is convenient to have in a dairy are the *creamometer* and *lactometer*. The *lactometer* is an instrument by which the specific gravity of milk or of any other fluid, is ascertained—that is to say, the quantity of water in it; since the instrument really shows the difference between the milk and pure distilled water. All milk is composed of water in which are suspended casein (or cheesy matter), butter, milk sugar, and various salts; the proportion of water in 100 parts being 87, and as the specific gravity is increased in a ratio to the quantity of these solid materials, so the number indicating it marks their amount. The instrument (see Fig. 1.) consists of a glass tube, with a bulb at its lower extremity, in which is a little mercury so adjusted that it will make the mark 0 on the scale float exactly level with the surface of distilled water. When the jar accompanying it is nearly filled with the milk to be examined (taking care to shake up the cream just before doing this), the instrument rises in proportion to the density, and by casting the eye along the surface of the milk, the number on the scale on a level with it will indicate the exact specific gravity. The ordinary specific gravity of new cow's milk, at 50 Fahrenheit, is said to be 1.031; but this is no test of the cream, which is very variable, and in many cases the specific gravity of the skim-milk is greater after skimming than before. As a test for *curd*, it is of great value; but for measuring the cream the best instrument for ordinary use is the *lactometer* of Sir Joseph Banks, now called *creamometer*. Three or

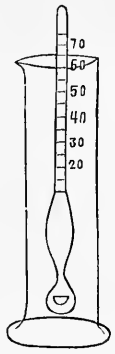


Fig. 1.

Lactometer.

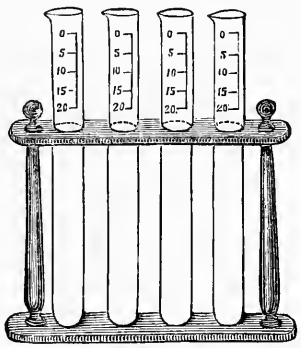


Fig. 2. Lactometer.

four glass tubes, about a foot high, divided into 100 parts, and graduated near their upper ends, are loosely supported in a wooden stand, and filled with the milk warm from the cow, one being devoted to each sample to be examined. The scale is generally extended down one-fifth of the tube, and this will almost always suffice; but in some cases the amount of cream is much greater than this. After standing twelve hours, the cream has all risen to the surface, and the figure opposite its *lower* edge marks the percentage of cream to milk. Thus, supposing it stands at the figure 10, then there is 10 per cent. of cream; or, if at 5, then only 5 per cent., and so on. The average of cream appears to be about 8 or 9 per cent., but in different breeds and pastures it will vary greatly from that amount. Provided with these two instruments, one of which measures the amount of curd, and the other that of cream, the cow-

keeper will be able to ascertain whether the cows which he has are worth keeping, or whether he shall make an attempt to better himself by getting rid of them, and purchasing others.

DAMASK.—A twilled fabric invented and originally manufactured at Damascus, whence its name. It was made of silk, and was highly ornamented with figures of animals, birds, fruits, and flowers, woven into the cloth. It is still distinguished by this method of ornamentation, though the material of the modern damask is generally linen, and sometimes woollen, or even cotton, or a mixture of linen and cotton. Linen damask is very generally used for table-cloths and napkins, and some of them are very rich. As regards fineness of fabric and beauty of designs, the French damask is the best, but the Scotch is also excellent. Cotton damasks are made in imitation of the linen; though they answer very well for many ordinary purposes, and are cheap; they are not so durable as linen, and they require frequent bleaching to preserve their whiteness.

Diaper is a variety of Damask, woven in the same way, but of smaller and simpler patterns; it is made for inferior table-cloths, and for napkins, towels, and various other domestic purposes. Those called *union* are composed of linen and cotton; and there are also cotton diapers.

DAMSON.—Damsons are small black plums, which grow like others of their species on small trees, and are found in the markets generally from about the middle of July to December. They are soft to the touch when ripe.

Cheese (Damson).—Boil the damsons in a stone jar placed in a sauce-pan of water. Pour off some of the juice, and to every two pounds of the fruit, after skimming and stoning it, weigh out half a pound of sugar. Set the fruit over the fire in a sauce-pan and boil quietly until it begins to look *dry;* stir in the sugar and simmer slowly for two hours; then boil it quickly half an hour or until it candies on the sides of the pan. Pour it into buttered pans or dishes, about an inch deep, so that it may cut firm, and set away to cool. By some persons, the plum-stones are cracked and the kernels boiled in the cheese.

Preserves. (Damson.) (*See* PRESERVES.)

Wine. (Damson.)—I. *Take:*-Damsons, 4 galls; water, 5½ galls; sugar, 15 lbs; crude tartar, 3 oz.

Take four gallons of ripe damsons, remove and break the stones of about one gallon for the flavor of the kernels; press the fruit thoroughly, pour upon it five and a half gallons of water, and strain the liquor; let it stand twenty-four hours, and then add fifteen pounds of sugar, with three ounces of crude tartar, and ferment; after which it will be ready for bottling.

II. *Take:*-Damsons, 8 lbs; boiling water, 1 gall; sugar, 3 lbs.

Pour upon every eight pounds of damsons one gallon of boiling water, and let them stand three days, when strain off the liquor, and to every gallon add three pounds of raw sugar; put it into a cask, and ferment with the bung loose; then bung it closely, and in about four months it will be fine for bottling.

DANDELION BEER. (*See* BEER.)

DANDRUFF.—There is no permanent remedy for dandruff except frequent and regular brushing of the hair and keeping the head as clean as possible. The use of pomades or grease of any kind must be abandoned or kept within the most rigid limits; and about once a week the head should be washed with clean cold water with a few drops of ammonia in it, rubbing the scalp vigorously with the fingers, and brushing the hair out dry. The hair-washes and other preparations sold for this purpose are generally worthless, and even when they afford temporary relief, they always aggravate the evil in the end. The cause of dandruff is the failure of the skin on the scalp to perform its functions properly, usually on account of the pores being stopped up with grease; and the only remedy is to bring the skin back to its normal condition, which can be done only by cleanliness, local friction, and attention to the general health.

DAPHNE.—There are numerous varieties of this plant, of which the best known is the *Daphne odorata*, one of the few old-fashioned plants which the modern rage for novelties has not succeeded in driving out. It is an evergreen shrub, attaining the height of about four feet, and remarkable for its long, dark, glossy green leaves, and its branches of fragrant white flowers; as an indoor or green-house plant it is unsurpassed, flourishing and blooming in situations where most other plants would dwindle and die. The cultivation of the green-house varieties is almost identical with that of the camellia (*see* CAMELLIA); the same temperature will do for both. The plants should have plenty of room, and the pots must be well drained. Potting should generally be done in the fall, about the time the plants are housed, when as much of the old soil should be removed as is possible without disturbing the roots.

The chief varieties are: *Daphne odorata*, which may be obtained of any florist at trifling expense, and is propagated from cuttings with great ease. It is the most desirable variety, from its season of blooming, which is from December till March, according to the degree of heat given. There is also a variety with red flowers, known as *D. Odorata rubra.*

Daphne hybrida is a pretty evergreen shrub, with purple flowers, which it produces very freely, and which are extremely fragrant. It blooms at all seasons of the year, but especially from January to April; and should be taken indoors in winter.

D. Mezereum is a hardy plant, has white or purple flowers closely attached to the shoots, and is the earliest blooming shrub of our gardens, the blossoms appearing in the beginning of April before the leaves expand. This species, notwithstanding its beauty, has a dangerous reputation, as the berries which it bears

are highly poisonous. Its juice is acid, and produces inflammation and even blisters upon the skin.

DATE.—The fruit of the date-palm, which grows on the margin of the great sandy deserts in the north of Africa, and forms the principal food of the inhabitants. They are brought here in a preserved state, pressed into a sort of matting called *trails*, and when sold by retail, are cut or broken into lumps and sold by the pound. The fresh fruit arrives here in January, February and March. In buying, choose those which are large, softest, not much wrinkled, and of a reddish-yellow color on the outside. Dates have a laxative effect when eaten in any quantity, and are thought to give tone to a weak stomach. Soaked in water and sweetened, they make a pleasant and refreshing drink.

DECANTING.—To insure the clearness of wine for serving is an important point. At rest on the shelf or in the bin, it will be clear enough; but removing it, drawing the cork, and decanting it, very often render it turbid. Be careful not to shake or disturb the crust when moving the bottles about or drawing the cork, particularly in the case of port wine. Never decant wine without a wine-strainer, with a bit of fine cambric in it to prevent the crust and fragments of cork from going into the decanter. In decanting port wine or any other red wine, do not drain it too near the bottom; there are generally half a wineglass of thick dregs in each bottle, which ought not to be drawn out. In white wines there is not much settling; pour it out, however, very slowly, and raise the bottle up gradually, watching for any indication of dregs or foreign matter. No wine should be decanted in a hurry.

DECAY. (*See* DECOMPOSITION.)

DECOCTION.—A decoction is the extraction by water of certain principles in vegetable substances by subjecting them to boiling for some time; the well-known beverage, barley-water, for instance, is a decoction of barley. Many parts of vegetables are not soluble in water, as the resinous parts; but others, such as mucilage, are entirely so. Decoctions, from the nature of their constituents, very soon ferment and spoil; for this reason they should be prepared in small quantities only as they are wanted, and never used, especially in summer, over forty-eight hours after they are made.

DECOMPOSITION.—In hot weather fresh meat is very likely to become tainted if kept any length of time, no matter how many precautions are taken. The decomposition may be arrested and the taint (if slight) removed by sprinkling a little soda over the meat before cooking. The taint may also be removed by covering the meat with common charcoal for a few hours; or by putting a few pieces of charcoal into the water in which the meat is boiled.

DECORATION, with special reference to walls, floors and furniture.

☞(This article attempts to treat only the æsthetic side of furnishing. For the practical side, see CARPETS, FURNITURE, HOUSE, PAPER HANGINGS, and PICTURES).

The man of average cultivation or much more than average cultivation cannot be expected to have an understanding of the rather complicated problems of artistic arrangement of things in his house, unless he has given special attention, and even some hard study to the subject. The knowledge of these things he must acquire by gradual accumulation. He cannot expect to succeed entirely at once. If he will keep himself open to the influence of that which he distinctly recognizes to be good, always preferring to err on the side of simplicity, he may be sure of the eventual attainment of a measurable success.

It is hard to point out even the most general principles of this kind; for the danger is that we shall be too dogmatic, and shut the door on the ten thousand little things that shall some day be waiting to come in. A work of art of any kind cannot be entirely the product of calculation; the result of certain determinations of the mind. The painter has a clear idea of the picture he is to paint; but in putting it on the canvas, he sees a thousand beauties he had not thought of before. He himself is long in arriving at such rules as he ever learns. After going on for years finding out the uselessness of much that he had before esteemed, he begins to see his way and to do good work. Before "seeing the way," one not only cannot do good work, but cannot understand over well if another tries to tell him how; moreover the best part of what the artist learns must always be unspoken, and very often not even arranged in definite thoughts in his own mind.

Within a very few years increasing attention has been given to these things. England has been the stronghold of certain reformers. Books have been written pointing out the necessity of principles in art, and calling attention to many important truths long neglected; and designs have been made, a few good, and many in the various stages of badness. The authors of these books and designs, in their intentness on general truths, have left unnoticed those equally important truths, harder to seize and name, which have to do with the graces of art. Of course, this in a great measure was unavoidable.

Angularity.—One would think, to see some of the books, that anything but angularity of form and figure, hard decisiveness of line, and crude "flat" color,—too much beauty, in fact,—must be incompatible with truth and honesty in artistic furniture or decoration. The angular is good, but so are many other things. Man is not all elbows. Curves badly designed, curves out of place, or an excessive proportion of curves are not good. Indulging in a flourishing penmanship of art, because we wish to do something and do not wish to take the trouble to think, is worse than the severest angularity. A box is a very useful thing, and properly an angular thing. But why, in the modern English fashion, be so eager to call

attention to its straight lines and corners, as if they were the only virtues it possessed? Every one has opportunities to see how the Japanese deal with it. They give the edge a delicate quarter bead; or simply soften it off with a scarcely noticeable rounding. They sometimes give a gentle bending inward to the corners; and their decoration of its surface is entirely independent of its structural form. They do not allow it to deny its construction, but they make it so modest that it shall not loudly proclaim its accidents of being.

By much the larger proportion of things that we put in our houses are primarily constructed for other purposes than to merely please the eye. Flowing lines are beautiful; and the curve has infinite possibilities, while the straight line is the most limited of things: but the limited is a large part of all things; and infinite possibilities have ruined more things than shapes and forms.

Honest construction.—The first point, as has been insisted on so much of late, is honesty of structure to begin with. If a chair, being made of pieces of wood joined together, gives way at some of the joints after a few months, let one see that it was not perfectly framed, and reject the mode. If the chair of his great grandfather's day (probably despised for its simple unpretending character), after years of use is still strong, let him believe in the strength which endures. Let him also see that the most beautifully designed chair is the one with nothing but its most necessary parts, beautifully treated. (And his great-grandfather's chair is probably the most beautiful one he has in his house.) Let him see that parts shaped in violation of the nature of the wood they are made from, are weaknesses, and that ornaments fastened on are only incumbrances. If to decorate is to adorn, it is as well to remember that only to the worthy thing belongs the worthy adornment. When we decorate a sham, our decoration becomes but a sham added to a sham. The greatest beauty of design in anything for use, is always the result of the beautiful treatment of the proper structural parts, and not the result of added or complicated parts. For a good thing to perfectly and fully show its nature and character, is for it to show beauty. And, for it to contradict or conceal its character, and pretend to the character of another thing, is for it to be unbeautiful. It may have certain misplaced external aids, beautiful in themselves, sometimes so beautiful as to lead us to overlook many faults. But models, where beautiful parts conceal many faults, are not to be deliberately chosen. Indifference to having things good and honest in themselves inevitably brings bad art. Always, in the long run, according to the worth of the thing treated, will be the skill devoted to its treatment.

Bad construction illustrated.—In the room where this is written there is an oak chair, probably intended by the cabinet-maker for a dining-room chair. It is better than a large proportion of tnose to be found in the shops. The front, back, and side-rails forming the edges of the seat, are very fairly framed into the four uprights; two forming the front legs, and two forming the back legs and side pieces of the back. All this is good. But, as the back inclines, and the back legs turn outward, to preserve its balance, the two long uprights cannot be straight pieces; they are, therefore, sawed to a curve, instead of being bent, or selected pieces of a natural curve. In consequence of this the grain of the wood crosses the back legs diagonally, and one of them has split near the foot, and been clumsily mended. The legs taper towards the feet, where they are bored to receive castors, instead of being fitted into a sheath or cup of the castor in the old-fashioned way. The consequence is that two of the legs are split by the leverage of the shaft of the castor. To prevent the chair from being "common," and at the same time to avoid the expenditure of time-consuming labor, the top and bottom rails of the back are sawed out in rather extraordinary shapes, necessarily thick and clumsy, to prevent the pattern from weakening them too much. Then, in an attempt to lessen some of the clumsiness of the top of the back, a small moulding has been worked and glued on; and, as it was impossible that the direction of grain of wood in the moulding and in the back of the chair should everywhere agree, one part of the moulding has split off. The uprights of the back are finished with ornamental knobs; but instead of the knobs being simply the ends of the pieces of wood finished—because a finished end is more agreeable to look at than a squarely-cut off butt—they are turned and fastened on with dowel pins and glue. One of them can be taken out and put in like the stopper of a vinegar cruet (perhaps with a not unsimilar result). The whole is covered with a thick varnish, which injures the color of the wood, looks extremely disagreeable wherever there is an edge, and renders every bruise and scratch doubly conspicuous.

Elaboration not necessarily ornamental.—We are too much in the habit of supposing that any way which is something more than the most simple way of treating a thing, must be an ornamental way. The knobs and mouldings and sawed figures in the chair just spoken of, could only seem ornamental to the most uncultivated taste and perception. The sawed work is not bad because it is sawed, but because, being sawed, it cannot be both delicate and strong, firm enough for its place. The helping the shape by a sort of cornice moulding stuck on, even if it were finely designed and worked, would not be good. Nothing, however rich or rare, can be ornament unless it adorns; and it cannot adorn unless it has some kind of pertinence to that to which it lends itself.

There is such a thing as fatiguing elaboration. So we sometimes find that simple, good textures—such as are produced by threads in

stuffs, or grain in woods—are better in certain places than ornamental detail; that they give neither vacancy nor sufficient fulness to deprive better things of their importance.

The kind of elaboration which is necessary for full expression, and the kind of finish which is not finish for the sake of finish, are good. But that elaboration and finish which is independent of thought and labor, such as the smoothness, evenness, and accurate spacings and markings given by the help of machinery, must always be contrary to the spirit of art. A smooth texture and a feeble expression, a mathematical precision of form and no life, a perfect evenness of color and no subtleties of contrast, often go together. Over-accuracy in small things, and too perfect a finish to correspond to the worth of a thing, gives us the idea of time wasted. The best artist never grudges labor so long as he can add import; but when he can only add polish, he stops. When he has a fine curve to draw, he does it with all the accuracy required for its subtle expression; but when he has to draw a circle or straight line, which do not have so particular an expression, he does not always do it with so great accuracy.

Consult the relations of things.—In furnishing and decorating an ordinary dwelling-house, we must consider the occupants' style of living, and the sizes, aspects, and uses of the room; richness or simplicity, and scale and number of parts, warmth or coolness of coloring, and fitness of ideas of association being therein observed. A leading idea should control the management of each room, and of all the rooms, as a whole; the different rooms contrasting, but the transition from one to another being rather a "mild surprise" to the senses than to the mind. The absurd idea of one style for the drawing-room, another style for the dining-room, another for the library, savors rather of the curiosity of the museum than of the quietness of home; and shows a disposition to regard art as a pretty plaything, rather than the outward expression of a dignified life.

The indiscriminate mingling of variously constructed and fashioned pieces of furniture, of the ordinary patterns of Brussels carpets and Eastern rugs, and of incongruous ornamental articles and pictures, is fatal to style and dignity.

Fashion no guide.—Fashion and caprice in these things cannot be a help but only a hindrance. For beauty is of a nature unchanging. Of course as our perception of beauty may be growing, the love of newness is not inconsistent. Beauty is infinite and each new phase that we discover may well give us pleasure. But the love of novelty for its own sake, change because it is change, is fatal to the health of art.

There is no help to be found in some of the new affectations in furniture and decoration—the decoration mannered, prosy, and harsh in its contrasts, and the furniture, made often in protest of some former sham or absurdity, with a little common sense, and a vast deal of bad taste, having for strong points clumsiness of structure, and ornamentation of restless chamfering and coarse mouldings, with badly painted tiles let into the woodwork, drawing the eye by a harsh spot of color and disagreeable contrast of texture to a design composed without thought or feeling. There must be contrast, but it must be harmonized contrast. Good contrast is that which makes us recognize the qualities of things by showing us how they differ with their neighbors. Harsh contrasts, discords, may become parts of the finest harmonies by having that which shall lead to them and from them. If the discord is such that it shall catch the eye suddenly, and require it to make a jump to get away again, it is, instead of a simple discord, a false note; a fragment of another key. The discord should be the bringing together of two things so harshly opposed, that by themselves no kind of similarity can be discovered; but which by their accompaniments lead to the perception of a common ground of meeting.

Flat decoration.—One of the doctrines of the advocates of this decoration and furniture is "only flat decoration for walls." They say, "common sense points to the fact, that as a wall represents the flat surface of a solid material which forms part of the construction of a house, it should be decorated after a manner which will neither belie its flatness or solidity. For this reason all shaded ornaments and patterns, which by their arrangement of color give an appearance of relief, should be strictly avoided. Where ornamental forms are introduced they should be treated in a conventional manner,—*i. e.*, drawn in pure outline, and filled in with flat color; never rounded." But, surely, the great painters did not teach us so to believe. A picture painted on a movable mahogany panel, or on an immovable stone wall, is painted on the flat surface of a solid material, and in no way belies it. The truth is, that imitative painting on the flat surface of a thing, *of structural features sometimes belonging to that thing* (for instance, mouldings, pilasters, panels and niches on a flat wall), does belie its flatness. But the making use of that flat surface for the display of painted ornament or story, in no way belies flatness or solidity or any other structural condition. The true artist would prefer *not* to have equal outline or flat unmodulated color. Flatness is related to vacancy, and art as well as nature abhors a void. We often accept willingly flatness of pattern. But such patterns according to the measure of their goodness, will be varied with passages of minutely broken parts and comparatively solid masses, in a general way suggesting to the eye at a short distance, a play of light and shade and color.

Conventionalism should not be sought for its own sake, as if it were a thing excellent in itself; when its only virtue is to stand for something better. If conventionalism means, as

it seems to with many modern designers, that where a natural form is bounded by a curved line, it shall be represented by a straight; where it has a rounded projection, it shall be represented by an angular one; and where color is changing, it shall be crude and flat, then it is not good. Such a conventionalism is a kind of grotesqueness without beauty or meaning. The grotesque in art is that peculiar, humorous conjunction of things which is set beside serious things for relaxation, and for contrast; it is always significant of something, and not a mere contradiction of the beautiful. It is always humorous, for it is an attempt to say that for which no accepted phrases have been discovered.

Right conventionalism is a kind of shorthand, really used because of the embarrassment of our riches, used because we must sacrifice enormously more than we keep, giving hints and suggestions of a wealth that we never show. But it, at least in its old forms, is a thing that we hope to use less of to-morrow than to-day.

A GOOD WAY TO BEGIN WORK.

It is always best to begin by first considering those things in which we have least room for choice. On account of the change and want of aim of "fashion," the least variety is to be found in floor covering, and the greatest in wall covering—supposing we use wall paper, which is almost always the best where economy is a motive.

The first step, it is true, that time dictates in preparing the house, is to color the woodwork and the walls. But this being done to suit the taste as far as it alone is concerned, trouble is apt to come in finding carpets to correspond. As the accessible variety of wall paper and tints for painting is so much greater than that of upholstery and carpets, it is best to select the carpets at the very outset. Then it will be comparatively easy to find appropriate furniture and, that being selected, to find appropriate wall paper and to paint appropriately, if the woodwork is to be painted.

One strong argument in favor of unpainted woodwork, especially as compared with that painted white, is that it will tone in with a variably greater variety of carpets and wall decorations. White woodwork is constantly bringing to grief the best laid plans of wall and floor decoration. Pretty papers and carpets have more than once been sent home and even put in place before it has been realized that the uncompromising woodwork must kill them.

FLOORS, AND FLOOR COVERING.

For the floor of the entrance or hall, encaustic tiles are best in durability as well as in appearance. Combinations of these may be made good and harmonious in color if we will but be simple and not attempt display. Marble tiling, to be satisfactory, must be expensive, and demands the exercise of great taste and judgment. Next to tiling, hard wood, paint, or even oil cloth, if it can be had of moderately fair design and color, should be preferred to carpet.

For other floors in the house a large rug, reaching to within about a foot and a half or two feet of the walls, is, for many reasons, to be preferred to a nailed-down carpet covering the entire floor. This may be made up of carpeting sold by the yard, with a border; or may be an Eastern carpet in one piece, which of course is very greatly to be preferred. For the floor itself hard wood is best. If it have a border, one of simple design should be chosen, avoiding conspicuous spots or zig-zags, or sharply contrasted stripes. If it is to be painted, the carpet, furniture and wall paper should first be chosen, then the floor color agreeably to all of these, contrasting not too strongly with the carpet, or the effect of breadth over the whole floor may be destroyed.

In the carpet the contrasts and colors should generally be not too striking, because it is the thing most under our eyes when they often need rest. If the texture be a deep velvety pile, the contrasts of lights and darks and separate colors may be greater. Generally, it had better be inclined to the dark and warm in tone. Aggravating lessons in geometry, as well as roses, scroll, and pictures, as subjects of design in carpet are things to be tabooed. There are to be found carpets of fair design copied from Eastern patterns, but their over preciseness and painful small accuracies, and their inferiority of color, leaves them far behind a genuine Oriental carpet, with its slight pleasing waywardness.

MOVABLE FURNITURE.

In choosing furniture, consider the colors of the woods. Against a wall of dull red, black, or dark oak, will generally look well. And with a wall of sage or olive-green, greenish-blue, or dull grey-blue; mahogany, oak, walnut or rosewood. Yellow with black and some kinds of grey always looks well. Rarely choose any wood lighter than oak. If the articles be of somewhat light construction they may contrast rather strongly with the floor and walls; if large enough to make important masses in the room the contrast should not be of a sudden and violent kind. The introduction of black in furniture is often of great value. Generally take the plainest and most reasonably constructed furniture that you can find. Avoid in it extravagance of shape; curving fronts to drawers, things made to imitate drawers and doors, and lumps of carving glued on. Do not lightly and without consideration choose adjustable chairs, extension tables, and shutting beds. Avoid having a piece of furniture which is not quite sufficient for its uses, and so has to be eked out by other insufficient things: such as two or three inconvenient make-shifts for book-cases, cabinets, etc.

Upholstery of chairs and sofas may contrast with floors or walls; there can be no rule; sometimes one plan will be found the best and sometimes the other; or a partial adoption of both. The larger the pattern in furniture, coverings and curtains, the less conspicuous should be their colors.

Curtains may generally harmonize pretty closely with the furniture upholstery. They may often be somewhat more lively, as, in the day time the light does not fall on the surface the most in view, and at night they should not break too suddenly the general effect of pictures and furniture against the walls. They should always be suspended from rings on rods. Lace curtains, except where mere screens against the inside of the window sash, are not to be commended on any account, to say the least.

WALL-PAPER, WALLS, AND CEILINGS.

The carpets being selected, little difficulty need be experienced in properly coloring the walls and woodwork.

Woodwork.—(See above under "A good way to begin work.")

If the doors and casings in a room be of hard wood, their color is of importance in connection with floor and walls. If they be painted, the colors may well be of such tones as will more strongly contrast with the walls than with the carpet, the doors themselves being more nearly like the wall than the casings around them are.

Ceilings cannot be left plain unbroken surfaces of white plaster without sacrificing the harmony of the room, if the least degree of fulness of coloring be attempted in other parts. They may generally be made lighter than the side walls, and slightly contrasting with them. With the walls very light, they may be darker. In any case they should have as much gentle variation of light and dark and color as may be. A fashion of showing the construction of the floors and roofs above, is a thing to be wished by all decorators. It would add more to the effect of the rooms we live in than one-half of what we now take pains to do to them.

Papers.—In choosing wall papers avoid over brightness, display, sharpness, or angularity of pattern. It is not necessary that they should be precisely and accurately "made out." It is as well that something should be left to the imagination. Prefer those of a general tone of warm grey, and but few detached broken colors; or creamy ochreish yellows; or sage, citron, olive and tea greens; or dusky reds. Blues are the hardest to choose; they should generally incline to green or greenish-grey, or to the quality of blue of some kinds of old china. Rarely or never choose stripes, whatever your friends may say about their making your rooms look higher. Sometimes they do so, and sometimes they do exactly the reverse by calling attention to the shortness of the space they have to run. They more often than not produce a bad effect on a wall.

Dado.—It will often be of advantage to have a plinth or dado around the room varying in height from one and a half to four feet, of a color of about the same degree of force as the color of the floor. It should be plainer in design than the wall above; and may often with advantage be absolutely plain. The line is invaluable where there are pictures. Dadoes to passages and staircases, where there is no wainscot, are good on account of their usefulness as well as appearance. They had best be made of paper of such a pattern that where a piece is rubbed off, another may be substituted. It is not always the case, as is constantly said, that a wainscot or dado makes a low room look lower; for it is interrupted by doors and windows and large pieces of furniture. Entire blankness and absence of detail never make a space look larger. Detail is always good when sufficiently subordinated, and always bad when obtrusive. Simple treatment is what is required, that the space shall not be so cut up as to leave no leading feature.

Border.—A border or frieze does often make a room look lower. It arrests the eye at a lower point than the top of the wall, and by its uninterrupted line carries it around the room at that level.

Pictures.—The walls may properly be allowed to furnish the key for the whole scheme of color; and not necessarily namable color as red, green or blue; but hue, tone, what might be called atmosphere. In proportion to the absence of pictures walls require a strong and elaborated treatment. If slight water-color drawings or prints are to be hung on them, walls should be light and delicate. If oil paintings are to be hung, the particular pictures should be consulted, as far as possible, beforehand. It is often said that water-color, and oil-color pictures, or either of them with photographs and prints, should never be hung together on the same wall. But it is as well not to make quite so broad a rule. We have seen a water-color drawing which erred by having too much of one particular color hung with good effect by a cool brown Liber Studiorum print, and a photograph of a painting made to glow with a warm hue by a neighboring blue.

ADAPTING THE NEW TO THE OLD.

If in taking a house you fall heir to modes of coloring in paper, wood work or paint, which are not good, but which you nevertheless must keep, modify your further furnishing so far as you can so as to be in harmony with them, even though in itself it is not what you would prefer. But, if the *forms* of wood work, plaster ornaments, etc., be bad, do not let that influence your further choice. It might lead to consistency, but it would be a consistency of ugliness. Supposing the wood

work to be painted white, after the common fashion, any system of full coloring for the further decorating and furnishing should not be attempted. With large spaces of white paint or smooth white plastering opposed to large spaces of coloring you cannot have a harmonious result.

REMARKS ON THE VARIOUS ROOMS.

The hall it is well to have rather darker than the rooms opening from it, on account of the agreeable contrast. It is also well to have the coloring quiet and grave, without strong contrasts and never rising to positive color. The ornamental detail should be very restrained, it being rather out of order in a place which is principally a passage, and more telling if kept for other parts of the house. Large comparatively blank spaces are in place here, the incidents of light and shade often giving enough variation.

Dining-room.—Probably the fashion of having a dining-room sober and rather dark in its coloring, came about because of the table and those around it being the chief point of interest, and also of the pleasant contrast of the drawing room.

When the sideboard is simple in its lines and dark and subdued in color, whatever is put on it will show to better advantage.

The drawing-room of course should be somewhat light and gay; fitted to be bright at night and should not have any point of concentration, or be too decided in any way.

The library, where it is a library, should contain nothing to distract the attention; the ornament and coloring should be of the most quiet kind. Instead of things being so arranged as to appeal to the eye, the eye should have to search for things.

Bed-rooms ought to be airy and rather light. But curtains hung so as to be easily drawn to shut off draughts and light are desirable. If the furniture is to be bought in the shops, the plainer it is the better.

GENERAL ADVICE.

Advice in these things can only be of value so long as we remember that it is but advice, but the occasion would probably be rare when we could not let the following have the force of rules.

North rooms, South rooms, poorly or fully lighted rooms, whatever their uses may be, should have some attention given to making their coloring suit their respective quantities and qualities of light. In doing this, that kind of contrast between different rooms in a house which is always pleasant, is secured.

Adhere as much as possible to simplicity of general arrangement. Avoid on the one hand meagreness, and on the other hand what is perhaps worse, overcrowding.

Beware of "hard-finish" and white paint, and all large spaces of plain white in carpet, curtains, walls, or ceilings; of brilliant things, large mirrors, displays of gilding and marble, and elaborate *cast* metal gas-fixtures, long lace curtains, sentimental statuettes and bronzes, and an undue abundance of small "artistic" things.

It is better not to indulge a fondness for that useless order of things which includes "tidies," "mats," worsted embroideries, etc. As we usually see them they are harsh, spots of white or inharmonious vivid color, and not untrying to the nerves of those who do not feel at liberty to treat them with disrespect, and who do not like "fancy things," although they may care for art.

Finally, do not be disturbed if your house be simple, inexpensive, and unpretending; but do be disturbed if it be "cheap;" that is, if it be evidently not a fine thing, while it makes a shallow pretence by being dressed up in the fashion of a fine thing. Extreme simplicity and great dignity may go together—dignity and cheapness never. Remember that a quiet harmony of colors, and the simplest mode of arranging simple things, are always good, and that brilliance, abundance, and extravagance, are always, at least, near the perilous borders of no-land.

A FEW GENERAL RULES CONCERNING THE DECORATIVE ARTS.

I. A work of art of any kind is produced only when the desirableness of it is seen. It is the working out of an idea, and not the result of an ambition of making something new to attract attention and win applause.

II. Any work of the decorative arts should possess fitness, proportion, harmony, and suggestiveness. Its fitness, proportion, and harmony should not only concern the relations of the various parts to each other, but should refer to the occasion of its being, and also to everything that accompanies it. Its suggestiveness should be of that kind which hints at what is, for the occasion, most agreeable to the mind and eye. Hence, in all good periods, forms from the vegetable and animal worlds, and the creations of the ideal world, as accepted at the time, have been favorite subjects; while very small portions of angular or crude geometric forms have been allowed.

III. Whatever quality or condition of beauty may be agreeable to the eye in nature, will be agreeable to the eye when made use of in art.

IV. The primary reason for the decoration of surfaces in variously disposed masses or lines or colors, is to obtain an agreeable modulation, tending to gently disturb a sense of entire smoothness or flatness.

V. General arrangements should first be cared for, divisions and subdivisions being less and less marked and prominent. The treatment never leading the eye to the study of separate parts before recognition of the whole.

VI. Lines should be associated and have relationship to each other, and sympathies of tendency, radiating, or converging.

VII. Large, flat spaces, unbroken by lines, figures, forms, or colors, or by play of light and shade, should be avoided, especially where there is firmness or smoothness of texture.

VIII. Purely geometric figures or arrangements of figures can never be satisfactory unless partially obscured by passages of varying light and shade, interrupted by inferior figures or forms, or dominated by superior figures or forms.

IX. Mathematical precision in drawing geometric figures, or in patterns of regular or formal design, should generally be avoided.

X. The conventionalization of forms of objects should never be sought for its own sake. It should be of the kind made necessary by the restrictions of place and means.

XI. Ornamental figures and forms may be subject to geometrical arrangements. But all large styles depart more or less widely from any too evident geometric arrangement of parts. (In ornament, as in verse, a rhythm which is too obvious is less agreeable than too great irregularity.)

XII. Material should never be so treated as to assert itself for what it is not.

XIII. Imitations of textures, or accidents of surfaces, used to give to one thing the character of another thing—such as the imitating of the figured grain of woods and the veins of marble—should be strictly avoided; unless used as mere hints in a pictorial arrangement.

XIV. Decoration should be applied to necessary constructions; but unnecessary constructions, or imitations of constructions, should never be used as decorative in themselves, or as a means of introducing decoration.

XV. In ornamenting a construction, its expression of use or purpose as shown by its general form, should not be disguised or contradicted.

XVI. Positive color should be avoided in large uninterrupted spaces, and confined to small portions. In fine coloring, the prevailing hue is made up of divisions and subdivisions of more decided colors.

XVII. Any arrangement or composition of colors which is to stand by itself, and not depend upon association with other compositions, cannot be good if in it any one of the three primary colors is wanting.

XVIII. Color may be applied independently of details of form; as in the spots and stripes of many flowers and animals.

XIX. Gold should generally be contrasted with dark color. In many cases where brightness, delicacy and breadth are desired, it may be contrasted with light hues or colors.

XX. Patterns on a ground of different color, or degree of intensity of the same color, if much broken or minute in parts, or of extreme simplicity, may be used without outline or edging.

XXI. Patterns on a ground of a different color may be treated with an outline or boundary of color, contrasting with pattern or ground or both. (Examples in Eastern Rugs.)

XXII. Patterns in gold on colored ground, may generally be separated from the ground by an outline of darker color or black.

XXIII. Patterns in color on a gold ground, may generally be separated from the ground by an outline of a darker color or black.

It should also be remembered that no colors in themselves give the appearance of nearness or distance (as has been asserted), thus being more fitted for the nearer or farther parts of a form. We are in the habit of associating blueness with distance because of the blueness of the sky and distant mountains; but the same mountains look no nearer when purple; and the sky, although much bluer at the zenith, looks no farther off than at the horizon. The red and yellow in the sunset sky appear farther off than the blue shirt of the laborer returning home from his work. And in the house a blue plum appears no farther off than a yellow one when with it in a dish. Any color may be made to advance in the sense of being made to attract the eye, or may be made retiring in the sense of being "quiet." Hues or colors depend on their treatment or associations, for their prominence or quietness.

DEER. (*See* VENISON.)

DENTIFRICE. (*See* TEETH.)

DEODORIZERS.—These might be appropriately classed with disinfectants, but as there are times when unpleasant smells may require neutralizing which do not necessarily point to impurities or infection, we will mention here a few methods of *deodorizing* a room. It must not be supposed, however, that when the cause of a disagreeable odor comes from impure or injurious matters the danger can be averted by simply masking the smell. *Coffee* is one of the best of deodorizers. The best mode of using it is to dry the raw coffee, pound it in a mortar, and then roast the powder on a moderately heated iron plate until it assumes a dark brown tint; then lay it in a plate in the room to be sweetened. *Sugar* also is excellent, and a convenient way of using it is to bring in a few coals on a shovel and sprinkle the sugar over them, renewing it as the smoke ceases to rise. Brown paper or cotton rags burnt in a room are unsurpassed as a deodorizer, and purify vitiated air very quickly. For a sick-room nothing is more grateful and refreshing than to sprinkle cologne around the bed and curtains and to blow it through the air of the chamber. A pail of clear water set in a newly-painted room will remove the smell of paint, and modify the danger of sleeping in newly-painted rooms. Vinegar boiled with myrrh or camphor and sprinkled in a sick-room is also very pleasant and purifying. (*See* DISINFECTANTS.)

DEPILATORIES.—Substances for removing superfluous hairs. Many of them are offered in the drug-stores, but they are mostly

unsafe to use, as they have either an arsenical or caustic basis and are consequently highly injurious to the skin. Plucking out the hair by the roots is by far the best way of removing it. In cases where this will not answer, the following depilatory is less objectionable than any that can be bought already prepared: Take of best lime, slaked, one pound; orpiment in powder, one ounce; mix and keep in a well corked bottle. To apply, mix a small portion with water to the consistence of cream, spread it upon the hair and let it remain about five minutes, or till it begins to burn the skin; then remove it with an ivory or bone paper-knife, wash the part with water, and apply a little cold cream.

DEWBERRY.—A variety of the blackberry sometimes called *running blackberry*, because of its growing on a vine which creeps along the surface of the ground. Dewberries ripen rather earlier than blackberries, and in sunny situations attain a large size and have a peculiarly sweet and agreeable flavor, approaching that of the strawberry more nearly than any other fruit. They are seldom found in the market in any quantity, as they are not often plentiful enough to pay for systematic picking. They may be prepared for the table in any of the ways that blackberries are.

DIABETES.—A disease in which a very large quantity of saccharine water is passed daily by the patient, accompanied by great thirst and general debility. It may attack people of any age, but is far more fatal, and runs a much more rapid course in children and young people than adults or those of advanced age; amongst the latter a small quantity of sugar in the urine may be present at one time and absent at another, and these cases seldom need cause much anxiety. It is at present an unsettled question whether the liver or the blood is at fault in this disease, nor is it yet determined what part the nervous system may play in it, but it is an ascertained fact that irritation in certain parts of the brain will produce sugar in the urine. The kidneys are not the seat of mischief: they merely allow the sugary urine to pass, and, in doing so, suffer more or less in the process.

The most marked *symptoms* of diabetes are great thirst, dryness of skin, and passing an immense quantity of urine. The thirst is so great that the patient is always wanting some liquid, and will drink as much as four or five gallons of water a day in some cases; two or three gallons is a very common amount. Since they pass so much urine, the other tissues of the body are dryer than usual; the skin feels dry and harsh, and an eruption is liable to break out, and sometimes boils form; the nails are dry and often chip in consequence. The bowels are confined, and the motions are generally firm and dry. The urine is light in color, but much heavier than usual, from the great quantity of sugar present in it. Sugar may be detected in the urine thus: Take equal quantities of urine and liquor potassæ in a test tube, add a few drops of a solution of sulphate of copper, and boil; the solution will become first yellow, then orange, and finally of a deep horse-chestnut color. The test requires, however, to be carefully performed by a person possessing some experience in animal chemistry—to produce a satisfactory result. The appetite is generally good, and even excessive in some cases; the tongue is often dry and red, and the temperature rather lower than usual; the patient sleeps well, and the general health may go on for a considerable time without being seriously impaired. In the course of time there is more or less wasting of the body, and a liability to disease of the lungs. Cataract is also a by no means uncommon complication. In young people and children, the disease often runs a very rapid course, and may result fatally in six weeks after the commencement of the symptoms; much more commonly it lasts for two or three years, and, in old people, sugar may occasionally appear in the urine without any harm resulting. Death often takes place by suppression of the urine, followed by stupor, coma, and perhaps convulsions; or it may occur through general exhaustion, or from disease of the lungs.

Treatment.—The treatment of diabetes generally consists in confining the patient to a diet from which all starchy or saccharine articles of food are, as far as possible, excluded. Brown bread, bran biscuits, meat, green vegetables, milk, etc., may be allowed, but ordinary bread, sugar, rice, potatoes, etc., are prohibited. Persistence in this plan is often followed by much relief to the patient, causing him to gain strength, lessening his thirst and the quantity of urine, but it will not *cure* him; nor, at present, is any remedy known that can eradicate the disease. Since there is so much thirst, a large amount of water must be given—as much, in fact as the patient likes. Raw meat has been found to be beneficial in some cases. Various preparations, as diabetic-bread and diabetic-biscuit, have been recommended; but few can continue their use long, as they eventually tire of keeping to a restricted diet.

There are certain cases in which persons pass a very large quantity of urine without having any sugar in it: they are then said to be suffering from *polyuria*, or diabetes insipidus, a disease of much less importance.

DIAPER. (*See* DAMASK.)

DIAPHORETICS.—Medicines which increase the insensible prespiration. When they act very energetically, they are called *sudorifics*. During the administration of these remedies it is essential that the surface of the body should be kept warm; and for this purpose wool is generally employed, in the shape of flannel or blankets. Exposure to cold air is also to be avoided, as well as the drinking of cold water, though this in strong constitutions is often productive of extensive perspiration, and many people take a glass of cold water at night before going to bed, with the view of producing perspiration when they feel that

they have taken cold. It is a bad plan, in order to check excessive sweating, to expose the body while bathed in it, or while clothed with wet garments; but these should at once be removed and dry ones of a lighter character put on, or else the clothing should very gradually be made lighter, avoiding any sudden transition which would be likely to produce a chill.

(*a.*) Antimonial powder (compound powder of antimony), 5 grains taken at night, with a basin of warm gruel or white wine whey.

(*b.*) Dover's powder (compound powder of ipecacuanha), 5 to 10 grains, taken at night.

(*c.*) Liquor of acetate of ammonia, 1 ounce; ipecacuanha wine, 10 minims; sweet spirit of nitre, 20 minims. Mix, and give at night, or oftener if necessary.

DIARRHŒA.—Diarrhœa is in many cases a symptom rather than a disease. It is present in typhoid fever, is a frequent accompaniment of consumption and diabetes, and is produced by a number of pathological conditions which only a physician can understand. In its slight and more common forms, it is caused by indigestible food, or ordinary food eaten in too great quantity; by change of diet; by violent mental emotions: and by sudden changes of temperature, wet feet, and exposure to cold. When indigestion of food is the cause of diarrhœa, the purging itself soon removes the disturbing substance and the diarrhœa commonly ceases; if this should not be the case, a moderate dose of laudanum (fifteen to twenty drops) will generally prove effective. When the diarrhœa is produced by exposure to the cold or the like, a mild farinaceous diet, rest in bed, mustard over the bowels, and the use of laudanum or laudanum and brandy in small doses, may be had recourse to; in such cases too, the patient is generally benefited by wearing a flannel bandage around the abdomen, which may be retained after the attack to prevent recurrence.

In Children.—When diarrhœa appears in infants and young children, as it is very apt to do in the summer, it should be attended to at once; not always stopped immediately, since it is often an effort of nature to throw off something which is better away, but if allowed to run on it speedily becomes dangerous. The question as to when the discharges from the bowels should be stopped and when they should be assisted is a very difficult one to decide; but the following observations may be useful to mothers.

A diarrhœa which consists simply of stools rather loose, but otherwise of natural appearance is the least important; when they become quite watery, and their several ingredients seem separate and unmixed, it is more grave. Very watery discharges, especially when accompanied by vomiting, are symptoms which should cause a physician to be summoned at once. When the disease attacks a nursing infant, the discharges should be carefully examined, and if curds appear in them the probability is that they are caused by over-feeding; the child nurses too long, or too often; and the stomach is only able to curdle the milk without digesting it completely. The remedy for this condition is to nurse the child at longer intervals, or to give it less at a time: and it is most probable that both a longer interval and a smaller quantity are needed. The sleeping room should be well ventilated, and at least once every day the child should be carried out to walk, or ride, so as to be thoroughly refreshed. If these dietary measures do not check the diarrhœa, resort may be had to chalk mixture (containing no paregoric), of which from half to a whole teaspoonful may be given once every two or three hours. This medicine should always be shaken up before a dose of it is poured out: and, as during warm weather it is apt to ferment, about half an ounce of the compound tincture of cardamons should be added to every four ounces. With this, the dose of the mixture may be made a little smaller.

When diarrhœa occurs in a child that is nursed in part and fed in part, it should at once be confined to its mother's or nurse's milk, even at the expense of some drain upon her. This will by itself generally effect a cure, but the chalk mixture may also be used if necessary.

If the child is weaned a milder diet must be tried. Its milk must be boiled and skimmed, and perhaps reduced in quantity. If this appear still to irritate the bowels, it may be well to try changing to the milk of another cow, and when all these fail, or sooner if convenient, a nurse should be found. The child that is weaned, however, very soon forgets how to nurse and cannot be made to take the nipple; in such a case the nurse's milk should be drawn and fed to the patient.

For a child that is older and that has become accustomed to a solid diet, the same general treatment must be adopted. All substances which are not easily digested should be at once abandoned. The diet must be limited both as to its elements and its quantity. Rice is one of the articles most frequently resorted to, and when it is relished is beneficial; but it often becomes disagreeable to the child if given continuously, and other articles can be selected which are equally useful. The sweet potato is one of these, but it should be thoroughly ripe and perfectly sound, and should never be given even to a healthy child if it has become in part black or has the smell of rose-water. Arrowroot is good, and so are very light wheat bread, and crackers. Still, the child will often require something besides this diet. Boiled milk is a very good addition to it; and when this does not agree with the stomach, soups, broths, chicken and beef-tea, may be resorted to, and these may be thickened with rice. When any meat is used, the fat should be carefully skimmed off. As to medicines, a child that has been accustomed to a solid diet must be treated much as younger children, though somewhat more powerful

astringents may be added to the chalk mixture. Dr. Parker recommends this combination: Take of chalk mixture three ounces; of tincture of kino (or catechu), half an ounce; of compound tincture of cardamoms, half an ounce. Of this, the dose for a child two years old is one teaspoonful every two hours, if the discharges are very frequent, and at longer intervals if not—care being taken to shake the bottle before pouring out the medicine. It is well, however, to give first a teaspoonful of syrup of rhubarb, especially if any undigested food has been passed.

A child with diarrhœa should be limited in its use of cold drinks and especially of water, of which it will drink large quantities and very frequently if allowed to do so. Its milk should be given as warm as it will bear it, as should its broth and other liquids, except in very rare cases when vomiting is excessive. But it is not necessary to compel the child to suffer from thirst; little pieces of broken ice may be put in its mouth occasionally. The child should be kept as quiet as possible, and if the diarrhœa is very bad should be compelled to lie upon its back. If there is any pain, the bowels should be covered with hot flannels; and while a diarrhœa lasts, and longer, a piece of flannel should be worn over the bowels, and if the child is delicate a flannel shirt should be put on. When vomiting and diarrhœa commence at the same time, there is reason to apprehend that the disease is cholera infantum, and a physician should be summoned at once. (*See* CHOLERA INFANTUM.)

DIET.—The subject of food in general, and of the nature and constitution of the different substances used by man for that purpose, is discussed in the article on FOOD; under the present head, we shall only treat of the circumstances under which special kinds of food are most favorable to health, of the relation of food to bodily conditions, and of those general principles by which man must be guided if he would provide himself with those classes of food most appropriate for his special purposes. Even when thus divided off, the subject of diet is so comprehensive, so complex, and so constantly modified by circumstances, that we cannot even attempt, in a work like this, a systematic survey of it, but must confine ourselves to such detached hints as appear to us capable of being turned at once to practical use.

The simplest and most powerful agent in determining the character of our food is *climate*. In cold countries the requirements of man are very different from those felt in the tropics, and from the Esquimaux, who, according to Dr. Kane, will drink ten or twelve gallons of train-oil in a day, to the Peruvians and other tropical nations for whom the banana sufficies for nearly all seasons of the year, there are various gradations in which the constituents of the diet bear a very direct relation to the prevailing temperature. In cold regions, man requires such food as not only supplies him with nutriment, but also with heat; as oil, butter, fat, sugar, and other substances in which carbonaceous elements predominate. In warm countries, on the contrary, it is one of the most essential conditions of good health, that his food should be as little heating as possible. In our own climate this law holds good as between summer and winter; in the latter season, plenty of lean meat, butter, potatoes, eggs, sugar, and similar food, are necessary to keep the animal machine in working order, while in summer the diet should consist chiefly of those substances of which nitrogenous or flesh forming elements compose the largest part. There is probably no other cause so fruitful in producing the dyspepsia and similar diseases of which Americans, as a nation, are in a peculiar degree the victims as the neglect to harmonize the food with the changing seasons. (*See* FOOD.)

The next most important question in determining the character of our food is that of its digestibility; and it must be borne in mind that the nutritive value and the digestibility of food have no necessary relation to each other. A food may have a very high nutritive value and yet be so indigestible as to be practically useless, and on the other hand it may be very easily digested and worth little or nothing for nutrition. No general rules as to the digestibility of different foods can be laid down, because it depends very largely upon individual habits and conditions. Persons who have a strong constitution, and take sufficient exercise, may eat almost anything with apparent impunity; but young children who are forming their constitutions, and persons who are delicate, and who take but little exercise, are very dependent for health upon a proper selection of food. As a general thing, when the body requires a given kind of diet, specially demanded by brain, lungs, or muscles, the appetite will crave that food until the necessary amount is secured. If the food in which the needed aliment abounds be not supplied, other food will be taken in larger quantities than needed until that amount is gained; for all kinds of food have supplies for every part of the body, though in different proportions. Thus, for example, if the muscles are worked a great deal, food in which nitrogen abounds is required, and the appetite will remain unappeased until the requisite amount of nitrogen is secured. Should food be taken which has not the requisite quantity, the consequence will be that the vital powers will be needlessly taxed to throw off the excess. There are other kinds of food which are not only nourishing but stimulating, so that they quicken the functions of the organs on which they operate; the condiments used in cookery, such as pepper, mustard, and spices, are of this nature. There are certain states of the system in which these stimulants may be beneficial and even necessary; but persons in perfect health, and especially young children, never receive any benefit from such food, and

just in proportion as condiments operate to quicken the action of the internal organs, they tend to wear down their powers. The same observation applies to the use of wines and other spirituous and malt liquors. Under certain conditions where the vital powers are low, they are a highly important addition to ordinary food; but when used habitually, their temporary stimulation is gained at the expense of permanently weakening the digestive organs which finally refuse to perform their work without some such external aid. It follows from the above that the requirements of food in each individual case may in a normal condition of things be left to the individual taste; and also that much more attention than the subject usually obtains should be given to the selection and preparation of such food as is indicated by experience to be most appropriate.

With regard to the *quantity* of food to be taken, this also depends upon individual conditions and cannot be formed into a general rule. Where hunger is felt it may safely be assumed that when the hunger has been fully appeased sufficient food has entered the stomach. Such are the circumstances of civilized life, however, that in most cases hunger is a very rare sensation; and food is prepared and eaten more to gratify the palate than because nature demands it. On this point each individual is and must be a law unto himself, and we can only point out the consequences of eating a larger quantity than is needed. When too great a supply of food is put into the stomach, the gastric juice only dissolves that portion of it which the wants of the system demand; most of the remainder is ejected in an unprepared state, the absorbents take portions of it into the circulatory system, and all the various bodily functions dependent on the blood are thus gradually and imperceptibly injured. Very often, indeed, intemperance in eating produces immediate results, such as colic, headache, indigestion, and vertigo; but the more common result is the gradual undermining of all parts of the human frame, shortening life by thus weakening the constitution.

As to the hours of meals these are of no importance provided they are regular and come at regular intervals. This interval should never be less than five hours, as the stomach requires at least three hours to digest its supply of food, and not less than two hours should be allowed it for rest and recuperation.

Eating between meals is a most injurious practice, the source in children, especially, of endless stomachic disorders. It may be well to give children under ten years of age one more meal during the day than the three which adults in this country usually allow themselves; but these, as we have said above, should be at regular times and with stated intervals between them.

After taking a full meal, it is very important to health that no great bodily or mental exertion be made till the labor of digestion is over. Muscular exertion draws the blood to the muscles, and brain work draws it to the head; and in consequence of this the stomach loses the supply which is necessary to it when performing its office, the adequate supply of gastric juice is not afforded, and indigestion is the result. The heaviness which is felt after a full meal is a sure indication of the need of quiet; when the meal is moderate, the process of digestion will be sufficiently advanced in an hour, or an hour and a half, to justify the resumption of bodily or mental labor. This completes what we have to say on the subject of diet in general, but under special circumstances there are some suggestions which may be found useful. Such is the case with those who lead a sedentary life, and on this point we can not do better than quote from Dr. Edward Smith's excellent treatise on *Practical Dietary*.

"Persons of sedentary habits," he says, "are liable to become either thin, feeble, and dyspeptic, or else to grow stout, according as the original state of their constitution and the attendant conditions of life have led. A certain amount of exertion is necessary to enable a person to breathe the pure air in sufficient quantity to carry on the function of digestion and other vital actions in activity and vigor; and when this is not obtained, the quantity of food which is supplied must be reduced, or fulness of the system, or derangement of digestion and general health, will follow. If the reduction of the appetite for, and the digestion of, food be greater than the necessary wants of the system can tolerate, the former result occurs; but if they remain good, the system will, at least for a time, store up fat within it, and the person will become stout. When with the sedentary occupation, the person becomes thin, feeble, and dyspeptic, it is necessary that the same plan should be adopted which has been laid down for persons of feeble constitution, viz: the frequent supplies of small quantities of hot food; and, as animal food excites the vital actions more than vegetable food, it should be preferred, and the quantity of it gradually increased. There are many in this state who hesitate to take milk and eggs, from having felt uncomfortable after their use; but they should be encouraged to take them, nevertheless, in the form which is least disagreeable to their taste. Milk in puddings or with chocolate, and eggs fried or made into herb omelettes, are the best forms of food. Meat is not objected to; but care in its cooking and flavoring, and variety of meat (excluding pork, and perhaps veal and fish), are necessary. Meat should be eaten twice a day; and, at the tea meal, potted meats, ham or eggs, should be added. Curries are valuable, and all the rest should be hot, fresh, and seasoned. So long as the sedentary habit is continued, the total quantity of food which is supplied should be less than would be requisite under other conditions; but it should be largely of an animal nature."

The diet of brain-workers, whether literary, professional, or business men, should be ex-

ceptionally liberal and nutritious, because labor of the brain exhausts the system to a greater extent than labor of the muscles. Professor Houghton estimates that three hours of hard study cause more important changes of tissue than a whole day of muscular labor. The exhaustion that one feels after hard study, or any kind of strenuous brain-work, is the result of waste of tissue, and this waste can only be repaired by food. For this reason brain-workers as a class require more nutriment than any other workers; but owing to their sedentary habits and consequent lack of exercise their powers of digestion are more limited, and it is necessary to select such articles of food as contain the requisite aliment in the largest relative proportions. It has long been one of the pet theories of popular physiology that fish and other substances composed largely of phosphorus are the most appropriate diet for brain-workers; but it is now conceded that the best food for the brain is that which best nourishes the whole body with special reference to the nervous system, viz: fat and lean meat, eggs, milk, and the cereals. Discussing this point in a recent treatise, Dr. George M. Beard says: "The diet of brain-workers should be of a large variety, delicately served, abundantly nutritious, of which fresh meat, lean and fat, should be a prominent constituent. In vacations, or whenever it is desired to rest the brain, fish may, to a certain extent, take the place of meat. We should select those articles that are most agreeable to our individual tastes, and, so far as possible, we should take our meals amid pleasant social surroundings. In great crises that call for unusual exertion, we should rest the stomach, that for the time the brain may work the harder; but the deficiency of nutrition ought always to be supplied in the first interval of repose."

The diet of persons who are either too lean or too fat should be nitrogenous (flesh-forming), or the contrary, according to the object to be accomplished. Plenty of lean meat, bread, butter, starchy substances, and sugar, will make a lean person fat provided the amount consumed (and digested) affords a considerable surplus of vital force over the amount required for daily use. The approved method of reducing corpulence is described in the article on BANTING'S SYSTEM. On this point Dr. Lankester says in *Good Food:* "A wholesome receipt for a stout person is, eat no butter at breakfast, and no bread at dinner."

The subject of general diet for the sick is treated of under SICK-ROOM; and where a special diet is desirable it is suggested under the different diseases for which it is recommended.

DIGESTION.—The alimentary canal is the great channel whereby new material is introduced into the blood, and it is in this canal that the important function of digestion takes place. A man swallows daily a certain amount of meat, bread, butter, water, vegetables, &c., and it has been computed that the amount of chemically dry solid matter taken daily by a man of average size and weight amounts to about 8000 grains; he also absorbs by his lungs about 10,000 grains of oxygen every twenty-four hours, making a total of 18,000 grains (or nearly two pounds and three-quarters avoirdupois) of daily gain of dry solid and gaseous matter. Of this quantity about 800 grains, or one-tenth part of solid matter, leaves the body daily as excreta, and as no solid matter in any quantity leaves the body in any other way, it follows that in addition to the quantity of oxygen absorbed by the lungs, about 7200 grains of solid matter must pass out of the body in gaseous or liquid secretions, supposing the man to keep the same weight. The urine, perspiration, and the expired air from the lungs, carry off nearly all this quantity in their secretions. All the substances used as food may be classed under four heads. 1. *Proteids*, or Albuminous compounds—bodies which are made of carbon, hydrogen, oxygen, and nitrogen, and sometimes a little sulphur and phosphorus; in this class must be placed such substances as the white of an egg, the gluten of flour, the fibrin of the blood, the lean of meat, the casein of cheese, and other allied preparations. 2. *Fats*, or fatty and greasy compounds, which contain no nitrogen, but are made of carbon, hydrogen, and oxygen; butter, lard, fat, all oils, and animal and vegetable fatty matters come under this head. 3. *Amyloids*, or starchy compounds, made also of carbon, hydrogen, and oxygen, and like the last group containing no nitrogen; starch is an important member of this group, and it is met with in all cereals and farinaceous bodies, as wheat, barley, arrowroot, rice, and potatoes. Sugar also belongs to this division, and is intimately allied to starch in chemical composition; the latter body is converted into sugar by the process of digestion before it is absorbed into the blood. Gum and dextrine are also members of the group. These three groups are all derived at present from the animal and vegetable kingdoms, and are produced by the agency of living beings. 4. *Minerals* are produced from the inorganic or non-living world; the salts of various minerals come under this head; common salt is the chief member of the group, and is taken daily in our food; nearly all the various foods above mentioned contain more or less salt of some kind. Finally, water is taken in varying quantity so as to dissolve these solid materials, and prepare them for absorption into the system. When these different foods are swallowed various changes take place. Starchy compounds are very insoluble, but the saliva converts these during mastication into sugar, and this passing down into the stomach is easily soluble; hence arises the necessity for well masticating bread, biscuits, potatoes, toast, rice, and arrowroot, etc., so that all the starch may be thoroughly converted, or else indigestion may ensue. Albuminous compounds, as the lean of meat, etc., should be well masticated so as to tear up each

portion into minute pieces and enable it to be easily acted upon by the gastric juice when it gets into the stomach; no chemical change takes place in the mouth with regard to this group, nor with the next two groups either; the only change is a mechanical one, and by this means the food is well mixed together and divided. The œsophagus is merely a tube to convey the food from the mouth to the stomach, and takes no part in digestion. The stomach is a dilated chamber where the food remains for a time to be digested and to be acted upon by the gastric juice. This important secretion, poured out from the walls of the stomach in great quantity during digestion, renders soluble all the proteids or albuminous compounds, and the more finely divided these bodies are, the easier does the process go on; when meat is swallowed hurriedly, or when tough, fibrous, and indigestible food is taken, the action of the gastric juice is lessened and indigestion results. Thus, in the course of three or four hours after a meal, the stomach contains all the proteids, amyloids, and minerals, in a state of solution, for water in some form is always taken with food; only the fatty matters as yet are unaffected. Passing down into the small intestine the food is now called *chyme*, but it does not go far when it meets with the bile and the pancreatic juice, which, acting on the fatty matters, form an emulsion, whereby the oily particles are so minutely divided as to render them capable of being absorbed by the lacteals and vessels of the small intestines.

Thus, either in the mouth, stomach, or intestinal canal, the various kinds of food are so acted upon as to render them capable of absorption, and this process goes on not only in the stomach but all the way down the intestines, so that the blood is supplied after every meal with a fresh stock of food to make up for the losses which are continually going on in other parts of the body. There is, however, always a residue of indigestible matters in the food, so that all the chyme is not absorbed, but the remainder is excreted daily and known as fæces. As the coat of the intestines is in part made of muscle, it is constantly contracting in waves and gently pushing the chyme forward so as to bring it in contact with different parts of the canal, and finally to expel the indigestible remainder. If this process go on too rapidly then diarrhœa will result, and if it continue the patient will lose flesh because those substances escape which ought to be absorbed by the blood; or again, if there be disease of the mesenteric glands, or walls of the intestines, as in some cases of wasting disease in children, in cancer of the bowels, etc., then absorption will not go on properly and emaciation will be the consequence. Foods vary very much in their degree of solubility, and hence arises the importance of careful diet in those who have a weak digestion, or who are convalescing from sickness. By bearing in mind in early life the importance of mastication and digestion, much suffering may be avoided in after years, and many of those who are confirmed invalids and martyrs to indigestion might have been free from disease had they paid more attention to diet. Not only should the food be easily digestible, but it should not be swallowed too hastily; it should always be taken at regular intervals, and rest after a meal for a short time is advisable; also too much should not be taken at once, so as to make the individual feel distended and uncomfortable. (*See* DIET and FOOD.)

DIMITY.—A kind of cotton cloth of a thick texture, and generally striped or otherwise ornamented in the loom. It is chiefly used for articles of female dress, and for bed-furniture and window-curtains, and is very rarely dyed. There are two qualities of it, one being twilled and the other plain.

DINNER.—This article is about *good* dinners. But everybody's dinner ought to be as good as it can, and nobody who cannot take all the hints here given need for that reason decline to take any that he can, if he likes them. On ordinary occasions, where incomes are not above the average, circumstances generally determine what folks shall have for dinner. A very modest meal, however, may be tastefully spread and served, and there is no reason why, so far as they are available, it should not have the benefit of the principles that apply to the most elegant banquets.

On the other hand, where people spend no end of money, they are apt to have tastes of their own regarding the elaborations of a dinner, and not to care any more for hints open to everybody else than for pictures of which everybody has a copy. But even on the points essential to a good dinner, as distinct from either a plain or an extravagant one, there is much difference of taste. It is not best, though, to confuse our suggestions by much discussion of disputed points, but to confine ourselves as far as possible to the particulars regarding which most people agree, and not to attempt to advise those who are beyond the need of advice.

In the first place, a good dinner need not be expensive, though (as is not always the case where much money is spent) there is no end to the expense that may be indulged in without preventing the result being good.

To one philosophizing much on the subject, the order of the fundamental courses of a good dinner is apt to suggest the old saw of "fish, flesh, fowl, and good salt herring." Expand flesh to mean all edible flesh but game-birds, restrict fowl to mean only game-birds, interpret good salt herring as meaning something pungent—the whole range of salads (herring salad if you like it), keep in mind what everybody knows—that before dinner comes soup and after it dessert, and you have the key to the whole subject—fish, flesh, fowl, and good salt herring. All beyond this is mere elaboration, and all that requires variation from it is exceptional. Give a man more, and he should feel honored; give him this, and he

should feel contented, for he cannot say that he has not had a good dinner.

Now for the elaborations.

I. Five small raw oysters, opened (on the *deep* shell, so as to retain the liquor) just before dinner, and put at each plate before the dining-room is opened. A colored doiley may be put under them on each plate. If oysters are not in season, substitute small round clams. If weather is quite warm, let them rest on each plate in a bed of cracked ice. In either case, quarter of a lemon on each plate. With clams, red pepper within reach.

II. After fish, either patties, bits of toast, each supporting a single selected mushroom and saturated with brown sauce, or some similar trifle. Whatever is used, let but one be put on each plate, and *before* the plates are handed.

III. If you have more than one meat, let the first be relatively substantial, and the second of a lighter character. For instance—a *filet* of beef might be followed by chicken croquettes, or a boiled turkey (which is never really good without oyster sauce) by mutton chops with almond paste. Other things even, let a roast precede a boil, *but* put the heavier thing first.

IV. After meats, *Entrées*, such as croquettes, calves' brains, devilled kidneys, oysters fried or broiled, etc.

V. Before game, a small glass of sorbet to each to be brought in *in the glasses*.

VI. After sorbet, where there are no ladies present to whom they are apt to be disagreeable, cigarettes.

VII. With game, jelly; though true epicures don't take it. The salad is frequently served with the game, though for those who wish both jelly and salad, this is awkward, if jelly be served.

VIII. After salad, cheese, either one of medium strength, or two kinds—one pungent, one mild. The waiter had best hand both kinds together (previously cut up) for the company to choose. With this, hard crackers.

IX. If you elaborate your dessert, let the order be; pastry or pudding, ices, fruits, nuts, and raisins, bon-bons.

X. Black coffee in small cups. Sugar (in lumps) to be passed separately. This is quite frequently reserved till the ladies have left the table and served to them in the parlor, and to the gentlemen in the dining-room.

WINES.

The temperature at which they should be drunk is treated elsewhere, under the titles of the wines themselves. Their order is given below.

The fundamentals (both of food and wine) are printed in capitals. Of course no list could include everything. This one merely attempts to give what can frequently be realized. If you care for anything more, you have probably already so far studied the subject as to be beyond the need of any aid.

BILL OF FARE.	WINES.
Raw Oysters or clams.	Sauterne, or any light white wines.
SOUP.	SHERRY.
Olives. FISH. Olives, Dressed cucumbers, etc.	Latour, Blanche, Chablis, Chateau, Yquem, or other white wine with a body. Some like a substantial white wine with oysters.
Either *Bouchées à la Reine*, Mushrooms on toast, or something similar.	CHAMPAGNE.
MEAT. If more than one, roast first, or the heavier first.	CHAMPAGNE.
Entrées (any light made-dishes not sweet.)	
Sorbet.	Cigarettes.
GAME.	RED WINE NOT SWEET, *i.e.*, Claret or Burgundy, etc.
SALAD. Olives, Pickles. etc.	Port.
Cheese, Crackers.	Still white wine, any named above.
DESSERT.	
Pastry.	
Ices.	
Fruit.	
Nuts and Raisins.	
Bon-bons.	
Black Coffee.	*Liqueurs*, Brandy, cordials, etc.

If you omit any of the courses indicated by capitals, let them be game first, then fish, then salad, last soup.

SETTING THE TABLE.

To raise feeding from the grade of an animal function into that of a fine art is worth anybody's while, and almost anybody can do it—certainly anybody apt to read this book. It need cost but a little polishing of glass and metal, and a handful of flowers, to make a very plain table pleasing to even the critical eye.

Have a thick, soft blanket under the table-cloth. It prevents noise from laying things down, and gives a pleasant feeling to the hand resting on the table.

Decoration.—The first rule for setting a table well, is not to put on it anything to eat. Exception may be made in favor of a few ornamental plates containing bright colored pickles, olives, fruits, and confectionary. These are admissible only in so far as they are decorative. Let each course be brought on and removed separately after the guests are seated.

Now here is a *very* important matter, which even good dinner-givers sometimes neglect. *Do not let the ornament in the centre be so high as to prevent people naturally seeing each other across the table.* If you do, it will confine the talk to people sitting next each other, and seriously impede general and lively conversation. There is no denying that a high centre-ornament is decorative, and

excellent for a supper where people stand. But a little taste and ingenuity will devise low ones suitable for dinners that will not interfere with the distinctively human enjoyment—conversation. Flowers, of course, are generally the most available material. They should not be gathered, however, into a single flat mass, but should be placed at a height of two or three inches on small plates or the narrow troughs now to be found at the crockery stores, and grouped around some object not much over a foot high in the centre. This central object can be a bouquet, a stand of fruit, or any other tasteful thing that ingenuity may suggest. In warm weather, ice, either in a large clear block, or several pieces too large to melt out of proportion during the meal, combined with ferns or flowers, is suggestive, and may be made very beautiful. The writer wishes to state, most emphatically, that generally, on noticing that dinner is passing off with peculiar spirit, he has also noticed that the ornaments are so disposed as not to impede intercourse.

A small *bouquet de corsage* at each lady's place, and a flower with a leaf tied to it at each gentleman's, for his button-hole, are very agreeable.

Chairs.—Avoid cane seats in a dining-room. Where fine fabrics and laces are kept on them so long a time continuously (longer than anywhere else) they play havoc.

Plates.—One should be at each seat. The raw oysters or clams, on a separate plate, are placed on the first plate. So with the soup. The first plate is exchanged for the plate with the fish. Always have a stock of plates in reserve sufficient for all the courses and properly heated. The most decorated plates are best enjoyed about the time of salad or cheese and at dessert.

Knives and Forks.—It saves the waiter's time to start with at least two forks, and two knives by each plate. It is not bad to have three. One knife should be of silver, for the fish. Silver knives are, of course, essential for fruit.

Napkins are never supposed to appear a second time before washing. Hence napkin rings are domestic secrets, and not for company.

Wines that can be drunk at the temperature of the room may be on the table from the start and they add to the decoration.

Wineglasses.—Three or four with the water glass, are enough to start with. If you have more wines, bring the glasses on with them, and substitute them for the sherry-glass, sauterne-glass &c. Provide colored glasses for still white wines. Americans pretty generally set their glasses in a row at the right of the plate, in a direction across the table. The French quite generally set theirs in front of the plate, parallel with the edge of the table. Liqueur glasses come on with the liqueurs.

Clams (*Dont* forget the ice in warm weather) should always be on the table before the company comes in. The plates with ice are too ticklish for the waiter to pass over shoulders. Taking up the plates is easier.

Ice Pitchers are not articles of dinner-table furniture, except that in *very* hot weather one may be used from a side table.

Caraffes and cracked ice should be within everybody's reach.

Cards on Plates, bearing the names of the company, so as to seat them with reference to congeniality, are *very* important. For host or hostess to marshal them after they are in the dining-room is not nearly so easy as for them to marshal themselves by the cards, and the host and hostess are sure, in the confusion of the moment, to get people placed exactly as they did not intend to have them.

Bread.—Cut pieces about four inches long, two wide, and two thick, and always place a piece beside each plate in setting the table.

Finger Bowls are to be passed after pastry on plates with doileys between the plates and the bowls. The plates are to be used for fruit and nuts, if there are any. If none are handed, the finger-bowl will not be taken from the plate. The finger-bowl should be filled about one-third, contain a slice of lemon, and in very warm weather, a bit of ice.

Fruit.—It is well to have a dish, at one side, independent of any that may be on the table, with grapes cut into small bunches, and oranges and large fruits halved. If fruit decorating the table is to be used, let it be removed and so prepared before it is passed.

GENERAL HINTS.

Never let two kinds of animal food or two kinds of pastry be eaten from the same plate; make a fresh course of each.

Always change knives and forks, or spoons with plates. As before stated, it is well to start with two or three relays of implements by the plates.

Don't have over two vegetables with a course. Let them be offered together on the same waiter. At a large dinner, you can have two varieties in the *same course; i. e.*, two soups, two fish, two meats, etc., letting the waiter offer the guest a plate of each at the same time, the guest choosing between them.

Everybody is always out of bread; prevent it if you can.

One good waiter is worth *much* more than two poor ones.

Don't let a wineglass stand empty. If one is empty, it proves that the guest likes that wine.

Champagne is always too warm, but ice in the glasses is a poor remedy, so use the smallest glasses that are proper. They will not let it lose sparkle and coolness as readily as the large ones.

Pour out the wine for each course *before* the course is served, unless you have waiters enough to do it simultaneously.

Two hours and a half is long enough to serve any dinner that Christians ought to eat, three hours and a half is too long.

The host goes in first with the lady whom he seats at his right. The hostess goes in last with the gentleman whom she places at her right.

The worst torture that survives the inquisition is a *bad* formal dinner. A worse torture than any known to the inquisition is *any* formal dinner (the better the dinner, the worse the torture) inefficiently served.

Fish at dinner must never be fried or broiled, let it be baked or boiled. An exception may be made in favor of a delicacy, such as smelts or trout.

If anybody says champagne ought not to come in early, don't believe it.

Fresh pork and veal are seldom seen at the tables of those who know how to dine or to digest. But a ham baked with sugar, or champagne, is an honorable companion after fish, all the way down to game. It is *only* an accessory, though, never the basis of a decent dinner. It should be handed around sliced, after the regular course is served.

In place of salad, some specially nice vegetable, such as asparagus, green corn, or a well-cooked cauliflower may tastefully be served as a separate course. In fact there is much to be said in favor of always serving separately a vegetable which does not, like potatoes, stewed tomatoes, beans, peas, etc., seem the natural accessory of some meat.

Many an appreciative soul will be grateful if he finds his sherry cold; and probably none of those who usually take it tepid, will feel hurt.

Chesterfield's idea that a dinner party should not include fewer than the graces or more than the muses, has the approval of later generations. Especially commendable is the rule where waiters are scant. A superlatively good waiter in a well-ordered house *can* manipulate eight people, if he has an assistant in the pantry to prepare everything for him. If you ask one person more, you'll spoil the fun of nine, unless you get another waiter.

Last and not least, dining rooms are always too hot.

We append bills of fare—six for entertainments and twelve for family dinners. Although they are scattered through the seasons, they are almost all available at any season, and, with the help of the separate article on BILLS OF FARE, will probably aid the housekeeper in answering the constantly recurring question, "What shall we have for dinner?"

MENU FOR 16TH JANUARY.

Soup. (Sherry.)
Bouchées of lobsters. (Sauterne.)
{Boiled cod, with anchovy sauce. / Potatoes à la maître d'hotel.}
{Braised turkey, with chestnuts. / Canned asparagus. / Chicken livers stewed. / Cauliflowers.} Champagne.
{Quails, broiled with a slice of fat pork. / Celery salad.} Chateau Lafitte.
{Rice souflée. / Chocolate pudding.}
Neapolitan cream, cakes.
Coffee, fruits, nuts, etc. (Port.)

MENU FOR 24TH FEBRUARY.

Mock turtle, vermicelli, clear. (Sherry.)
Pâtés à la Reine (*chicken*).
Lobster farcie.
Striped bass, with shrimp sauce.
Fillet of beef, with stuffed potatoes. (Champagne.)
Roast chickens, with beans.
Sweetbreads, larded and served on a thick purée of spinach.
Sorbet.
Prairie fowls, with brown sauce. (Chablis.)
Endive salad.
Lemon ice-cream.
Whipped cream, with preserved strawberries.
Coffee, nuts, fruits. (Chartreuse.)

MENU FOR 15TH MAY.

Green turtle. (Madeira.)
Fried perch, with olives.
Boiled leg mutton, oyster sauce. (Champagne.)
Cutlets of chicken, à la Bechamel.
Hare, red currant jelly. (Claret.)
Potatoes à la crême.
Plum-pudding, brandy sauce.
Salade.
Coffee, with whipped cream.

MENU FOR 19TH JULY.—(A "Fish Dinner.")

Oysters on the half-shell. Select carefully at this season. (Rhine wine.)
Cream of fish.
Trout, with clam sauce. (Champagne.)
{Baked black-fish, with claret. / Fried potatoes.} Chateau Margeaux.
Fillets of halibut, bread-crumbed and broiled, with stewed peas.
{Clams in their shells. / Lettuce and endive mixed.} Red Hermitage.
Roman punch.
Strawberry cream.
Almond cakes.
Fruits, nuts, and coffee.

MENU FOR 1ST SEPTEMBER.—(A "Game Dinner.")

Oysters en fricassée.
Purée of grouse.
Salmon au court bouillon.
{Roast pea-fowl. / Braised wild duck. / Artichokes.} Heidsick.
{Pâtés of field-larks in fillets. / Lobster salad.} Sillery.
Roast pigeons.
Lettuce.
Biscuits glacés, vanilla ice-cream, coffee, fruit, Noyeau.

MENU FOR DECEMBER.

Oysters on half-shell. Hungarian wine.
Chicken. Madeira.
Sardines, olives, cheese, and pickles.
{Mackerel à la maître d'hotel. / Mashed potatoes.} Missouri Catawba.
{Roast turkey, cranberry sauce. / Braised ribs beef, with vegetables.} Steinberg Cabinet.
Breast of pigeon, larded, brown mushroom sauce.
Sorbet.

Ortolans, with fried oysters. Celery, with mayonnaise. [Montebello.	Pumpkin pies. Mince pies. Fruits, nuts, coffee.
Plum-pudding, rum sauce.	Vanilla ice-cream.

FAMILY DINNERS.

JANUARY 4TH.

Beef soup, with vegetables.
Bream, with oyster sauce.
Boiled potatoes.
Corned beef, with carrots.
Stewed kidneys.
Spanish puffs.

FEBRUARY 18TH.

Bouillabaisse.
Boiled chicken.
Fried parsnips, caper sauce.
Fillets of bass, with pickles.
Mince patties.

MARCH 21ST.

Oysters, with lettuce.
Roast sirloin of beef.
Potato croquettes.
Cabbage boiled with cream.
Baked lemon pudding.

APRIL 3D.

Fried oysters, sliced cucumbers.
Smelts fried with fat salt pork.
Baked potatoes.
Lamb chops, with baked macaroni.
Pumpkin pie and coffee.

MAY 20TH.

Clam soup.
Boiled leg of mutton, tomato sauce.
Mashed potatoes.
Oyster plant in batter.
Lettuce and green onions.
Raisin pudding, sherry sauce.

JUNE 12TH.

Salmon.
Chicken soup, with barley.
Cold roast mutton, with boiled cauliflower.
Lettuce, with cives and olives mixed.
Charlotte Russe.

JULY 10TH.

Consomme aux Nouilles.
Rock bass, with fried potatoes.
Tomatoes, with slices of chicken dressed in mayonnaise.
Peaches and cream.

AUGUST 14TH.

Clams on the half-shell, pickles.
Broiled porterhouse steak.
Green peas and asparagus.
Strawberry shortcake, coffee.

SEPTEMBER 24TH.

Oyster soup.
Broiled eels, with cucumbers.
Braised fowl.
String beans.
Celery, with capers.
Currant tart, with whipped cream.

OCTOBER 25TH.

Pot-au-feu.
Halibut, with parsley sauce.
The beef, with the vegetables.
Potato salad.
Tapioca pudding, sauce au quatre fruits.
Cream-cakes.

NOVEMBER 30TH.

Mock turtle.
Turkey, cranberry sauce.
Rice croquettes.
Egg-plant stuffed.
Snipe, fried oysters.
Water-cresses, with hard-boiled eggs.
German puffs.

DECEMBER 14TH.

Puree of beans.
Broiled herring, Dutch sauce.
Ribs of beef.
Boiled potatoes.
Stewed tomatoes.
Pumpkin pie.

DIPHTHERIA.—A disease, occurring generally in epidemic form, and characterized by a peculiar inflammation of the mucous or lining membrane of the fauces, pharynx, and upper part of the air-passages; sometimes the disease spreads to other parts of the mucous membranes. Diphtheria is often confounded with croup and scarlet fever, and it was not until recent epidemics that its distinctive character had been clearly and generally recognized. Children and young people are more liable to it than adults, and more girls suffer from it than boys; women also, are more liable to it than men, and the weakly of either sex more than the strong and healthy. Climate and season do not seem to have any influence on the disorder; it is equally severe in the summer as in the winter months, and in its symptoms and mortality it is the same in hot as in cold countries; yet various epidemics differ in severity and in extent. It is quite clear that the disease is contagious, but in what way is not so manifest; at one time an isolated case will appear in a village and not spread widely, while on another occasion a whole district will suffer severely; if one inmate of a house be attacked most of the others will suffer too, if they come in contact with the patient. The infectious matter is capable of diffusion into the air, and may be carried to distant parts, but it is more common for those to be infected who inhale the patient's breath, or who are in close contact with him. It is very doubtful if the disease can be taken from one house to another by an unaffected person, but the presence of one sick person in a house is sufficient for its communication to another, though the two be kept as separate as possible. Although every care be taken to purify an apartment in which a patient has suffered from this disorder, yet the infection will sometimes cling to it with remarkable tenacity. A case is reported in which a visitor to a country-house in Scotland, caught the disease while occupying a chamber in which a case of diphtheria had occurred eleven months before. The infection may be disseminated for some time after convalescence has been established. There seems to be a predisposition on the part of some people to take this disease; those who are highly nervous or who have undergone much mental activity, and those who have suffered from exhaustion or bodily fatigue are more liable than others. The disease seems to attack indifferently all classes of society. The time between the first exposure to the disease and the appearance of the disorder, varies from thirty hours to several days.

Symptoms.—The onset of an attack is marked by lassitude and prostration, aching in the back and legs, pallor of the skin, and pain in the throat; in children, there may be diarrhœa, headache, giddiness, and a stupid condition. The pulse becomes quick and may beat 120 or 140 times a minute, but the respirations are not particularly increased. The tongue is moist and slightly coated, the appetite is impaired, and there is more or less thirst. The throat is sore, and it is difficult and even painful to swallow, and this pain extends often to the ears, and there is a feeling of stiffness in the muscles of the neck. On looking inside the mouth there will be found some swelling and redness of the soft palate and tonsils, and the back part of the throat. If the inflammation extends upward into the nasal passage there may be a glairy discharge from the nose, or, if it spreads downward into the larynx, symptoms similar to those met with in croup will appear. There will then be hoarseness and weakness of voice, with cough and crowing inspiration, and if the obstruction be very great there will be imperfect expansion of the chest, pallor of the face, and lividity of the lips. When the inflammation extends to the larynx, the mortality, especially in children,

is very great; in adults, this extension of the disease is less dangerous, and they are often able to expectorate large pieces of the false membrane. The most characteristic appearance in diphtheria is the presence of a membrane which covers more or less of the surface about the upper or back part of the mouth; this membrane is soft and of ashy-grey color, and when removed leaves behind a red and raw surface, and then it rapidly forms again. The swelling of the mucous membrane and the amount of false membrane may be so great as to prevent swallowing, and to endanger life by preventing enough air from entering the lungs. The inability to swallow is often very great, and when fluids are taken in this condition they are apt to come back through the nose; complete inability to swallow seldom comes on before the third or fourth week of the disease, and it arises from a paralysis of the muscles of deglutition. This condition is a very serious one and adds much to the danger of the case; the pulse may become weak and slow, and death may occur suddenly from fainting or any undue exertion. Loss of power and irregular action of the muscles of the pharynx is the earliest and most common form of nervous affection in this disease, and it may disappear rapidly and leave no mischief behind, but sometimes it lasts for weeks or months and retards convalescence. Every case of diphtheria must be regarded with anxiety, as it is attended with considerable danger; and any extension of the deposit in the fauces, the onset of a hoarse voice, or croupy breathing, or the occurrence of hemorrhages, are serious symptoms.

Treatment.—There is no drug which can be looked upon as a specific for diphtheria, nor are there any means of eliminating the disease when once it has attacked an individual; yet, a great deal may be done at the outset if the disease is recognized sufficiently early. As a local remedy a solution of nitrate of silver should be thoroughly applied to the diseased surface of the throat, but not so forcibly as to rub off the membrane and cause bleeding to follow. Hydrochloric acid and honey have been used for a similar purpose, but in all cases medical advice must at once be sought, as it is dangerous to depend on merely domestic treatment. The patient should be placed in a well-ventilated room, and the air should be between 60° and 65° Fahrenheit, and kept constantly moist by letting steam escape from a kettle of boiling water. Complete rest must be obtained as there is always great prostration, and any exercise or movement on the part of the patient should be avoided so as to store up all his strength. Milk may be given to the extent of three or four pints a day, and brandy can be mixed with it, if it is necessary. Beef-tea, chicken-broth, and eggs may also be given; it is of no use giving solid food, as the patient will not care for it, and it will create pain in swallowing. Great care must be taken that the food is given in small quantities at a time, and slowly, because in consequence of the paralysis of the muscles of deglutition which often ensues, the act of swallowing is rendered dangerous. Where there is much obstruction in the larynx the operation of tracheotomy may be resorted to, but this proceeding is attended with a very small amount of success, and is nearly always followed by a fatal result in very young children. When convalescence begins, the return to solid diet must be slow and gradual; for many weeks the nutriment should be light and wholesome, and not too much should be taken at a time. As soon as the patient can be removed with safety, and without carrying infection to others, removal to country air or the sea-side is most beneficial, and it is the more needful in these cases as there is so much prostration and anæmia for many weeks afterwards; yet, even in bad cases, the health will in time be thoroughly restored. Cold bathing, tonic medicines, moderate exercise, or even a sea voyage, are very valuable aids in restoring the health. In cold weather a bath is not advisable unless the chill is taken off the water, but in summer time it is most refreshing and strengthening; carriage exercise may at first be taken, or a short walk during the fine part of a day, but no great exertion should be made, and the patient should rest as soon as a tired feeling comes on. Although this disease is not so communicable by the clothes as scarlet fever and some other disorders, yet it is always advisable that any articles of clothing should be thoroughly disinfected before being worn again, and for this purpose they may be placed in an oven and exposed to a high temperature; a similar remark will apply to the bedding, curtains, sheets, etc., of the room in which the patient has lain. When possible, the house in which the disease has broken out should be well cleansed and fumigated; it may be kept empty for this purpose for a week or ten days, and chloride of lime may be sprinkled about the rooms on the floors.

DISHES. (*See* EARTHENWARE.)

DISINFECTANTS. This term is confined here to substances used for destroying noxious odors or vapors or whatever may produce infection. A large variety of disinfectants are sold in the drug stores, and in summer time, especially, some one of them should be in frequent use in every house. The best disinfectants are, of course, fresh air (abundant ventilation) and an abundance of water (thorough cleansing); but with our defective drainage something more is frequently necessary. The following suggestions are from a circular of the Board of Health of New York:—

I. To disinfect diarrhœal discharges, and to purify water-closets, privies, drains, and cesspools, dissolve ten pounds of sulphate of iron (copperas) in five gallons of water, and add half a pint of common carbolic acid. Keep a small quantity of this solution in the vessel which is to receive the discharges. Pour a pint of the solution into the pan of the water-

closet three or four times a day, or add half the entire quantity to the contents of an ordinary privy-vault. If this practice is made general in all private dwellings, not only will the house-drains of such dwellings be disinfected, but the benefit will extend even to the public sewers

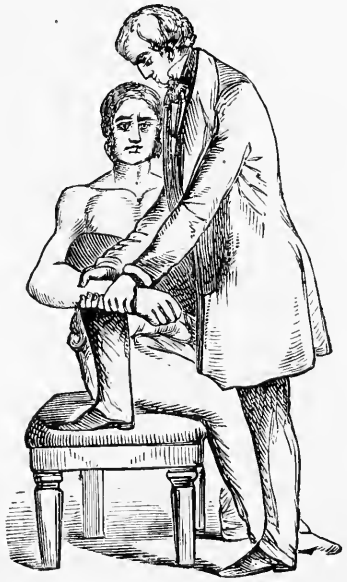
II. During the prevalence of cholera, all diarrhœal discharges should be received in vessels containing some of the disinfecting fluid, before being thrown into the privy-vault or pan of the water-closet.

III. Clothing, sheets, towels, etc., from patients with infectious diseases, should be immediately boiled; but, when this is impracticable, they may be thrown into a tub of water, in which have been dissolved eight ounces of sulphate of zinc, with one or two ounces of carbolic acid to every three or four gallons of water, or in water containing sufficient permanganate of potash to maintain a light-purple color, until the articles can be boiled.

IV. To absorb moisture from damp cellars, closets, courts, and sunken areas, use fresh stone lime finely broken, and suitably distributed, or placed on plates in the places to be dried. Whitewashing should be done with pure fresh lime. Putrid and offensive gases may be destroyed by chloride of lime. (*See* FUMIGATION.)

DISLOCATIONS.—In most cases of dislocation it will be best to wait for medical aid, which should be immediately summoned; but when this cannot be obtained at once, of course some effort must be made to relieve the sufferer. Before anything is done, however, make yourself very sure that it is a dislocation and not a fracture, for any mistake may result in serious injury.

Elbow (Dislocation of).—This is caused by a fall on the hand, one or both bones of the arm being driven backward. Seat the patient on a low seat, or on the ground; place your knee inside the bend of the elbow, then grasp the arm firmly just below the elbow with one hand, and the wrist with the other (if another person is present let him take the wrist); pull firmly, and at the same time bend the arm gently inwards, and the bone will in most cases return to the socket without difficulty.



Dislocation of the Elbow.

Hip (Dislocation of).—When this happens, the leg is shortened, and the foot turned *inwards* so as to rest upon the other one; but be sure it is out before attempting anything. In case of need, lay the patient on his back, and seat yourself beside him on the injured side; take off your boot and place your foot between the legs, protecting the parts with a folded towel; catch hold of the ankle or knee and pull hard until the bone slips into its place. This plan, however, will seldom succeed unless the operator is taller and stronger than his patient. If the accident happen to a muscular man, pass a towel round the upper part of the thigh (catch hold of it on the inside of the leg), let one or two assistants grasp the leg itself, and all pull firmly but gently *downwards* for some time until the muscles of the limb relax.

Jaw (Dislocation of.) — Wide yawning, laughing, etc., may cause this. The mouth is wide open, and cannot be closed; the chin is thrown forward, speech and swallowing are very difficult, if not impossible; and in front of the ear is an unnatural hollow. Place your hand on each cheek, and insert your thumbs, protected with a napkin, into the mouth as far back as possible; then press the thumbs downwards and backwards, and at the same time raise the chin with the outer fingers of the hands. If these movements are made with sufficient force, and at the same moment, the jaw will slip into its place. A small walking stick, used like a bit in a horse's mouth, may be tried instead of the thumbs.

Neck (Dislocation of).—This is caused by a heavy fall on the side of the head. The head is turned to one side and fixed, and of course *immediate action* is necessary. Lay the person gently upon his back, plant one knee against each shoulder; grasp the head firmly; pull gently upwards from the shoulder, and at the same time turn the head into its proper place.

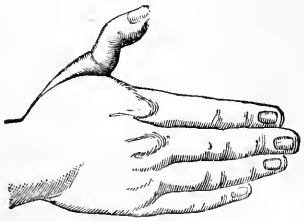
Shoulder (Dislocation of).—In this form of injury the arm-bone is displaced from its contact with the blade-bone. The arm cannot be moved without pain; the shoulder seems flattened; the elbow stands out from the side, cannot be made to touch the ribs, nor can it be brought up easily to a level with the shoulder; and the head of the bone, rounded in shape, may be felt in the arm-pit if the fingers are pushed well up while the arm is slightly moved outwards. Lay the patient flat on his back and sit down beside him on the injured side; pull off your boot, place your heel in the arm-pit, take hold of the arm with your hands, or a long towel fastened to it and passed round your neck,

Dislocation of the Shoulder.

and pull steadily. After pulling some time, tell the patient to turn round; while he is trying to do this, give a sudden strong pull, jerk your heel against the head of the bone in the arm-pit, and it will probably return to its socket with a snap.

Hamilton recommends, in his *Surgery*, the method of treating dislocation of the shoulder shown in the above cut. Push the shoulder gently but firmly forward, and at the same time raise the arm upwards and backwards.

Thumb or Finger (Dislocation of).—A surgeon's assistance should be sought for this, as it is somewhat difficult to manage. If such assistance cannot be had, get a strong person to



Dislocated Thumb.

hold the wrist, or if alone, lay the patient on his back. Rub some powdered resin on the hand to prevent slipping; pull steadily at the thumbs or finger for a minute or two; then turn it backwards, and at the same time push it into its place with the other hand.

Wrist, Knee, or Ankle (Dislocation of).—When such dislocations occur they are generally so severe that they should be at once placed under a surgeon's treatment. When this is not practicable, however, the method of action is the same in all cases. By pulling and stretching the limb for some time, the muscles will become so relaxed that the joint can be pushed back into its proper place.

DIURETICS.—Medicines which augment the secretion and promote the flow of urine. In slight stoppages of this secretion there is no harm in trying mild diuretics, such as the following: (1) Nitrate of potass, ten grains; sweet spirits of nitre, one drachm; spearmint water, one ounce; mix, and give a tablespoonful twice a day. Or (2) a strong infusion of the peel of the young branches of the elder-tree may be made, with the addition of half an ounce of cream of tartar to each pint; and of this infusion two or three ounces may be given three times a day. Where the disturbance is great, however, it is best to consult a physician, as much mischief may be done by stimulating diuretic in case of inflammation of the kidneys.

DIZZINESS.—(*See* VERTIGO.)

DOESKIN.—A compact kind of heavy twilled broadcloth, three-quarters of a yard wide, much used for men's pantaloons and vests. The best is the French, though the English is very good in the finer qualities and has the reputation of being most durable. Doeskin is generally black in color, and should be well shrunk before cutting into clothing.

DOG.—The dog shows the most valuable and complete conquest ever made by man over the brute creation. Even in civilized countries he is only less useful than the horse, though in the cities his position is chiefly that of a household pet. The Newfoundland is the choicest and noblest of all breeds of the dog, and of this the St. Bernard variety is the best; they are very large and powerful, extremely docile, and their intelligence is in some respects almost human. Next to these the English Spaniel is perhaps the finest species of dogs; but for a watch or yard dog none is equal to the bull-dog, whose ferocity is at times more like that of a wild animal than anything else, and whose strength makes him a terrible foe even to man. The choice, however, is almost unlimited, and the satisfaction which a dog will afford depends always more on the individual than on the breed. The small pet dogs, such as pugs, poodles, Italian greyhounds, King Charles' breed, etc., are perhaps the most degenerate productions of the genus, and striking instances of that modifying influence to which man subjects all nature. Dogs should always be kept out of doors as much as possible; and in the cities, where the limits within which they are confined are necessarily very narrow, they should be taken out for a daily romp or walk. If kept indoors too constantly they lose all that vigor and high spirit which distinguishes them from all other domestic animals.

Distemper in Dogs.—This is almost the only disease to which dogs are liable which they cannot cure themselves if allowed to run at large. It is contagious, and seems to be nearly always imparted by contact. The symptoms of it are readily recognized. The eyes become red, weak, and watery; the nose hot and dry; any movement in the air excites a cough or a sneeze; and there is a general fever and loss of appetite. The running from the nose, as the

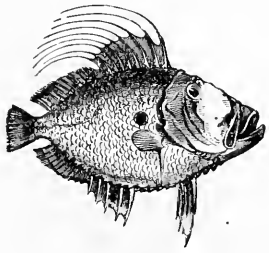
disease proceeds, becomes after some days mucous or purulent, loading the eyes and obstructing the nostrils. It then lodges in the bronchial tubes, preventing the free access of air to the lungs; and if it reaches this stage is very likely to prove fatal. A good remedy for distemper in its earlier stages is to force the dog to inhale the fumes of burning sulphur for five or ten minutes every day until distinctly relieved. The following, however, is the surest medicine: Take three grains of antimonial powder, ten grains of nitre, and three grains of powdered ipecacuanha: make into a ball and force down the throat two or three times a day. If there is much cough, add from half a grain to a grain of digitalis, and every three or four days give an emetic. Two to four grains of tartar emetic in a meat ball forms an emetic.

Hydrophobia.—When a dog is suffering from this disease he becomes solitary, morose, and sullen; and after a day or two begins to run about wildly, biting at whatever comes in his way. As the disease advances, he becomes more furious, he breathes quickly and heavily, his mouth is continually open, the tongue hangs out, and the lips and jaws are covered with froth. As soon as any of these symptoms appear the dog must be killed. There is no truth in the prevalent idea that hot weather is the cause of hydrophobia. (For the disease in man, *see* HYDROPHOBIA.)

DOILY.—A small napkin, generally figured and fringed, usually placed on a plate under the finger-bowl with the dessert at dinner. It is manufactured in pieces, containing a fixed number of doilies, and is generally so bought.

DOMESTIC ANIMALS. (*See* CAT, COW, DOG, HORSE, PIG, and POULTRY.)

DORY.—A species of fish much prized in England as food, but extremely rare in our markets. One variety known as "bristly dory"



or "blunt-nose shiner" is occasionally offered for sale in the fall and winter months. Its flesh is delicate and sweet, though the quantity is small compared to the amount of bones. Large dories are best boiled; smaller ones fried.

DOSES. (*See* at end of article on DRUGS.)

DOUCHE BATH. (*See* BATH.)

DOUGHNUTS. — *Take:*–Eggs, 4; sugar, ½ lb; butter, 2 oz; flour, 1 lb; boiled milk; nutmeg, cinnamon, and a few drops of some essence. Beat together four eggs with half a pound of sugar; stir in two ounces of melted butter, and then add a pound of flour and enough boiled milk to make a rather stiff dough; flavor to taste with nutmeg, cinnamon, and a few drops of some essence; cut into shapes with tumbler or knife, and fry brown, in hot lard. When done, sift sugar over the top and serve hot.

Isle of Wight. — *Take:*–Flour, 4 lbs; lard, 4 oz; brown sugar, ½ lb; allspice, 2 tablespoonfuls; cinnamon, 1 drachm; cloves, ½ drachm; mace, 2 large blades; brewer's yeast, 2 tablespoonfuls; milk; currants.

Work smoothly together, with the hand four pounds of flour and four ounces of good lard; add half a pound of fine brown sugar, two tablespoonfuls of allspice, one drachm of pounded cinnamon, half a drachm of cloves, two large blades of mace beaten to powder, two tablespoonfuls of fresh yeast, and as much new milk as will make the whole into a rather firm dough; let this stand till tender (a little over an hour) near the fire, then knead it well and make it into balls the size of a very small apple; hollow them with the thumb, and enclose a few currants in the middle; gather the paste well over them and when light, drop the doughnuts into a sauce-pan half filled with *boiling* lard. When they are equally colored to a fine brown, lift them out and dry them before the fire on the back of a sieve. The lard should boil only just before they are dropped into it, or the outside will be scorched before the inside is sufficiently done.

Raised.—*Take:*–Sugar, 1 lb; milk, 1 qt; home-made yeast, 1 teacupful; flour, 3 pts; eggs, 4; salt, 1 teaspoonful; cinnamon, 2 teaspoonfuls; mace or nutmeg, 1 teaspoonful; butter, ¾ lb.

Beat together a pound of sugar, and three quarters of a pound of butter; add a quart of new milk, a teacupful of yeast, and three pints of flour; set to rise over night. In the morning beat four eggs to a light froth, and stir them into the batter with a teaspoonful of salt, two teaspoonfuls of cinnamon, and one teaspoonful of mace or nutmeg; add enough flour to make a stiff dough; set to rise three hours or until light; then roll out, cut into shapes, and fry in hot lard till brown. Sift sugar on the top while they are hot.

DOVE.—The turtle-dove is smaller, but in general appearance very similar to the wild pigeon, of which it is probably the original stock, and in point of flavor is one of the best game-birds known; but in the eastern markets it is seldom found for sale, except as a pet. Doves are at their best in August and September, but may be had occasionally throughout the winter. Cook like wild pigeon.

DOVER'S POWDER.—Compound Ipecacuanha Powder. It contains ipecacuanha and opium, a grain of each, rubbed up with ten grs. of sulphate of potash, and so it must be prescribed with a due regard to the quantity of opium it contains. Ten grains of the powder is the usual full dose. It is a powerful diaphoretic —that is to say, it promotes free perspiration,

and is consequently of great service in many maladies. It does not agree with everybody, and at all times it is advisable to take precautions against cold after its use. In the feverish stage of a common cold, Dover's Powder is remarkably effective, and frequently cuts short the malady. When the patient is cold and shivering, but the skin hot and the nose stuffed, ten grains of the powder at bedtime, putting the feet into hot water at the same time, and promptly getting covered over with the bedclothes, will generally cause a profuse sweat, and will probably benefit the patient greatly. A cold sponge bath is advisable next morning, and the bowels must be seen to if confined.

DOWN.—There are several kinds of down; that called *gray down* or *white down* is obtained from the common goose, and *eider down* from the eider duck. This last is taken partly from the bird itself, and partly from the nest in which it broods, and is brought to this country from Greenland, Iceland, Northern Russia and the circum-polar regions. It is very expensive and should be used only for bed-coverings; to sleep on it destroys its elasticity, without which it is valueless.

DRAFT. (*See* BILL OF EXCHANGE.)

DRAINAGE.—Every house should have a suitable drain for the removal of its liquid wastes,—such as the outflow from the kitchen sink, and all manner of foul waters. The character of the interior drainage must, of course, depend on the circumstances, conditions and means of the owner; but no house is a safe or fit habitation which has not some well devised and soundly constructed exit-drain.

It may almost be said that the less complete the interior arrangements and the smaller the amount of liquid to be drained away, the more care must be given to the exit-drain. If in addition to the kitchen waste, it carries a plentiful supply from water-closets, bath-rooms, washbowls, etc., it is much more likely to keep itself clean than if the only liquid reaching it is that flowing from the kitchen sink containing a considerable amount of hot and melted fat, which, as soon as it loses its heat, congeals and attaches itself to the sides of the drain, arresting the organic refuse that floats in the water, and, sooner or later, inevitably choking the passage.

One common mistake with regard to house drains is that they are made too large. It is incorrect to suppose that a very large drain is safer than one of moderate (but sufficient) size, because the smaller the drain the more concentrated the flow, and the more thorough the flushing when larger amounts of water are passed through it, (as on washing day). If the liquid is received direct from the kitchen without any provision for stopping the grease, a twelve inch drain will soon be filled to a certain depth and the water-way will assume a broad flat form, over which the flow will spread itself and become too thin and too slow to produce the proper scouring effect.

A much smaller pipe would have this accumulation of grease confined within a narrower channel and the whole of a copious flow, being concentrated upon it, would have a much better chance to cut it away and remove it. It may be taken as a fixed rule that no private house, no matter how large, can possibly need for its drainage a pipe larger than four inches in diameter. Neither would it ordinarily be prudent to use a pipe smaller than this for any house, and this size may, therefore, under ordinary circumstances, be taken as an invariable one for private houses.

The drain should be as *straight as possible.* Every turn increases friction, and increases the danger of obstruction. Also, it is easy, with a straight drain, to pass through a stiff wire, from the outer end, and thus remove any accumulation.

The drain should have always as much *fall* as possible. Even an angle of forty-five degrees would not be too steep; but if the pipes are laid with care, if an absolutely uniform inclination is secured, even so little descent as one foot in one hundred feet will suffice.

The question of *material* is a very important one, especially with drains intended for the carrying off, other matter than pure water. These should be not only straight and uniform in bore, but they should be made of a smooth, impervious material. The common stone drain ("blind drain") is in every way bad. Its channel is irregular and rough; its inequalities accumulate deposits of fermenting solid matter; it gives easy access to rats and mice, which are tempted into it by the waste food it contains; and, worst of all, instead of carrying its liquids safely and rapidly to the point of outlet, it allows these to ooze and dribble away into the soil, often leaching down under the foundation of the house, or finding their way into the well from which drinking water is taken.

It is quite customary with those who wish to do thorough work to make the house-drain of brick, and this is certainly an improvement upon stone, but more cannot be said for it. It is necessary to make a brick drain unduly large, and it is impossible to make it so entirely true and smooth as is necessary for the best efficiency. In addition to this, its material is so porous that it can never be long relied upon to afford a perfectly impervious conductor of the foul and dangerous material that it is its office to remove.

The much lauded cement pipe is of good form, makes a true joint, and seems at first sight to be all that can be asked. It has been found, however, that there is a want of uniformity in the quality of these pipes which renders them somewhat unreliable, and they have the very important objection for such uses as this, that the slight roughness of their interior surface tends to catch particles of hair or fibre, or other material which become a nucleus for further accumulations, which form a firm and close attachment with the material of the pipe.

Experience has pretty well established a belief that the only entirely safe and reliable ma-

terial for this use is either iron, which is inconvenient to repair, or the vitrified stone-ware pipe, now universally used where the best work is done.

Not only must the drain be laid in a straight line, and on a true fall, but the greatest care must be taken that in fitting the ends into the sockets the bore is brought to a true line, and that in closing the joints, (while they are tightly and securely cemented so that there can be no possible leaking,) no cement is forced through to the interior of the pipe to create roughness in the water-way. Too much care cannot be given to the foundation upon which these pipes are laid, and it is never safe (unless they are laid in a heavy bed of concrete) to put them on land that has for any purpose, even within so long as a year, been dug and refilled below the level to which they are to lie, for the reason that the slightest settling of the ground, coupled with the heavy pressure of the earth above, is quite sure to deflect the pipes sufficiently to crack open their joints, and cause a leakage.

Where there is plumbing work in the house, which will furnish a considerable flow of water, it is best, where practicable, unless a flush tank is used at the kitchen inlet, to admit the kitchen outlet, at a point between the outlet of the drain and its connection with the soil pipe, for the reason that the soil pipe is more often flushed, and carries a larger proportion of pure water which will, by its cleansing action, have a tendency to remove any deposit from the kitchen outflow.

At the same time, whatever precaution is taken in the way of flushing the drain, it is always wise to adopt some form of grease trap, that is to say, to receive the kitchen outflow immediately on its delivery from the sink into a vessel that has its outlet through a bent pipe, the mouth turning down below the surface of its water. This trap need not be more than eighteen inches in diameter, and a foot deep, and should be covered and have a ventilating pipe, for its odors will not be pleasant. This mass of water will be cold enough to congeal the grease at once, and this will float about the

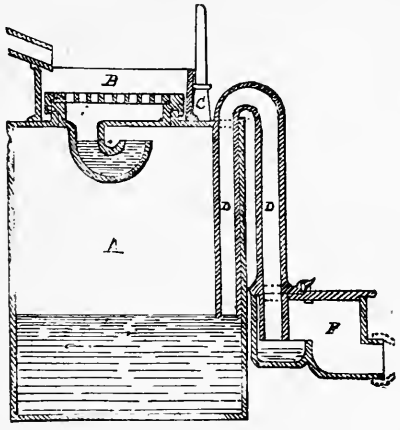


Fig. A.

level of the outlet, which will deliver only water fit to be admitted to the drain. In addition to this grease trap, (or in lieu of it, where the proportion of fatty matters is small), it is a capital plan to use a modern invention known as Field's flush-tank, shown in Fig. A, which is simply a vessel having its outlet by a siphon so arranged as to come into action whenever the tank is sufficiently filled, flowing copiously until it is emptied, and then accumulating the dribbling waters until it is filled again for another discharge. This arrangement secures the drain against the slowly trickling stream that has so great a tendency to deposit silt in its course, and secures the important condition that when any foul water is flowing through the drain it shall move forward in a rapid rush that will prevent the halting of solid matter by the way.

The final disposal of house drainage is in every way a serious matter, and it practically makes less difference than is generally supposed whether the water to be got rid of is only the kitchen waste, or the whole offscourings of a house with complete plumbing appliances. What we have to deal with in both cases is the organic matter that has been brought into the house, as food, etc., and whether this matter has passed through the additional process of digestion or not does not materially affect the results of its final decomposition after its removal. The only added danger when water-closets are discharged through the drain, arises in the case of excreta from patients ill with such diseases as typhoid fever, cholera, diarrhœa, etc. Practically, it is no more safe to make a careless disposition of the waste from a small kitchen than that from the whole of a large house with complete water works.

If the house can be brought into connection with a public sewer, this course will naturally be followed, and the sanitary questions arising are dependent very much on the condition of the sewers,—the discussion of which would be out of place here. In those cases where there

is no public outlet the question of the disposal of liquid wastes becomes extremely serious.

It may be set down as an invariable rule, applicable to almost all conditions, that it is never safe to allow household wastes to accumulate in leaching cess-pools from which their liquid is constantly oozing into the soil, with the danger that it will reach wells, or cellars, or that it will accumulate in the earth beyond the capacity of this to disinfect and decompose its filth.

If there is no land about the house and no sewer for discharge, the only safe plan is the very inconvenient and costly one of accumulating the whole liquid in an absolutely tight and thoroughly ventilated cistern,—to be pumped out as occasion requires.

Where there is land, even of small amount the best system is that by Mr. Moule, (See Fig. B) the inventor of the earth closet, to "divide and Conquer." This system, which is called *sub-soil irrigation* has now been used sufficiently long and is sufficiently introduced and recommended by the highest sanitary authorities to make it entirely safe to recommend its adoption. Its simplicity and cheapness, and the small amount of care that it requires, commend it to general attention. The amount of land needed for its application is by no means large. Two hundred square feet will be quite sufficient for an ordinary household, though there are certain advantages in extending the area where circumstances allow. Indeed by the use of a rigorous vegetation especially the sunflower, the Jerusalem artichoke, or the common grape,

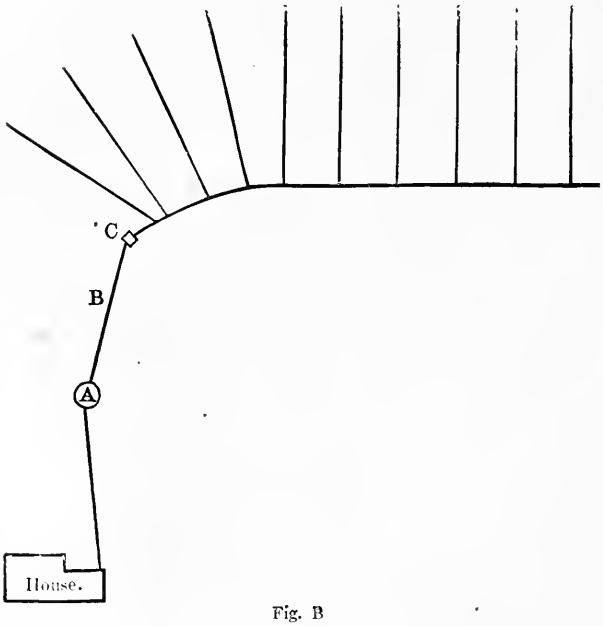


Fig. B

it will be possible to get on with much less than the area specified.

Only sufficient inclination of the surface is required to secure a flow in the drains and one foot in one hundred feet will be fall enough to accomplish this, especially where the flush-tank is used. The application of the system is as follows:

Let the tight drain deliver into a tightly cemented small cistern, say four feet by four feet, discharging through a bent overflow pipe of which the inlet is twelve inches below the point at which it leaves the wall of the cistern (near its top) Fig C. This will secure room for the deposit of solid matters at the bottom and for the floating of scum at the top. Once or twice a year it may be necessary to clean out the solid accumulation at the bottom, which is always worth the cost of removal as manure. The outlet should be not more than twelve inches below the surface of the ground, and should be continued through open jointed land-drain tiles say two inches in diameter, laid on a foundation of narrow boards or of inverted horse shoe tiles, also open jointed, and nowhere more than about twelve inches below the surface. This drain may be continuous, or it may be the main for any number of longer, or shorter branches, —the whole system acting as a means for conveying the foul liquid to all parts of the area used for irrigation, and delivering it at a point within the reach of the roots of plants. It would probably be best, when a single long line is not sufficient, to lay the lateral drains about four feet apart.

It will depend on the degree to which the grease trap, and the tight cistern withhold solid matters whether the drain will require cleaning at long or short intervals. The writer found his own irrigation drains arranged as shown in

Fig. B to work perfectly for five years. They were then cleansed and repaired at a cost of less

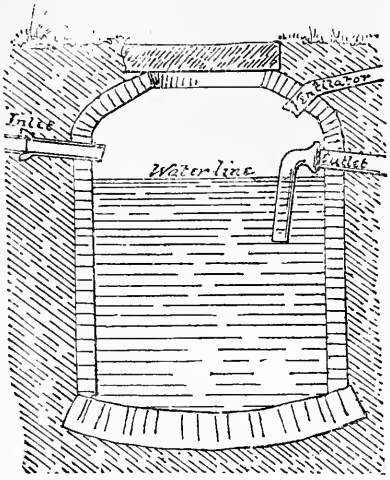


Fig. C.

than five dollars. A chief advantage of the boards or horse-shoe tiles is to afford a true bed that will facilitate the taking up and relaying when the cleansing is done. In cleansing it is only necessary to open from the upper end to a point where the drain has functions that are found to be quite clear.

By this simple process liquid matter of the foulest and most dangerous character is distributed thinly, and evenly through earth that is occupied by the roots of plants, and that is constantly permeated by the atmospheric air on which it depends for its oxydizing and disinfecting properties.

Means having been secured for the cleansing of the drain by regular flushing or by the use of a wire, or in whatever way may seem best, and all danger of the leaching away into the soil near the house or well, of the contents of this drain being avoided, our next attention should be given to the disinfecting of the air of the drain itself, and to preventing the ingress of this air into the house. The great disinfectant under all such circumstances is common air, and there is no way in which we can nearly so well secure ourselves against the production of dangerous gases in a drain as by the establishment of a free current of air within it.

In this work, as in almost everything else, the simplest way is the best. When the drain runs only from the kitchen sink, then a separate air pipe should be carried from its house end well above the top of the house, (not near to the top of a chimney nor to a window), and be furnished at its upper end with a ventilating cowl that will tend to keep up a good current. There should be some means for admitting fresh air at the outer, or cistern end of the drain, to supply the current. Where there are plumbing works within the house, the drain may be connected directly with the soil pipe,

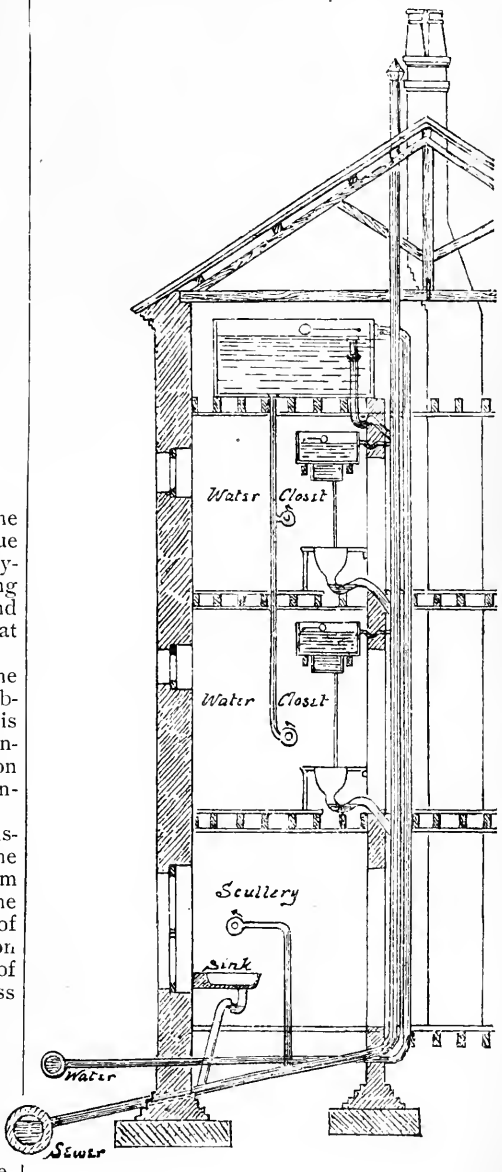


Fig. D.

and *no trap of any sort* should be used in its course, but the soil pipe should be continued of its full size out through the top of the house (See Fig. D) and be furnished with a ventilating cowl. There will then be no trap in the course of the pipe to arrest solid matters and

hold them for decomposition, and there will be a steady current of fresh air sufficient to prevent the *poisonous* decomposition of the refuse matter contained in the pipe or drain,—which if deprived of sufficient air would enter into a putrefaction that would be likely to evolve dangerous gases. The supply of air to the lower end of the drain may come from the sewer or from the cistern, *if these are well ventilated.* If there is NO sufficient ventilation of these, then there should be a trap near the lower end of the drain, and an inlet for fresh air into the drain above it. In cold climates, this inlet should be by a small pipe (say 1 1-2 inches diameter), and it should run under ground for a sufficient distance to become somewhat warmed.

To sum up, the leading principles to be followed are these :—to carry the refuse matter from the house through an absolutely tight drain to a tight cistern where their organic parts will rise to the surface, and where any heavy matter contained will settle at the bottom. To make the outlet from this cistern from a point between the scum and the sediment,—where only liquid will be supplied ; to discharge this matter into open jointed drains extending through such an area of soil as will prevent the concentration at any point of enough liquid to filter away into the sub-soil, and at a point so near the surface that it will be subjected to the disinfecting action of the soil and of vegetation ; to furnish, in all cases, a direct current of fresh air through the drain ; and where a soil pipe is used to continue the direct current through this latter also.

Drain Traps.—What are commonly known as drain traps would be better named "man-traps."

Fig. E.

If the necessary other means are adopted to prevent the ingress of foul air into houses, then it is very well to use immediately under the outlets of wash-basins, sinks, etc., some form of water-seal trap, which shall be to a certain extent a barrier against bad smells generated immediately within the waste pipe ; but, as a main dependence these traps are a delusion and a snare.

The usual form given to them is that shown in the accompanying figures, E F G. Figure G represents the common bell trap so often used over the outlet pipe of the kitchen sink, &c. Its movable part is very easily taken off, and is very apt to be left off, and even when it is in place it offers such a very slight resistance to the pressure of foul air as to be at all times inefficient and quite generally to be, as a trap, simply nothing at all.

The great objections to all water-seal traps are, first, that the resistance they offer to the pressure of sewer gas is so slight that a trifling change in the temperature of a sewer or cess-

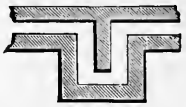


Fig. F.

pool, the sudden filling of the sewer with water during heavy storms, or even the influence of a strong wind blowing against its outlet, or sucking strongly at a chimney flue, will suffice to open them ; and, second, that water is a very imperfect *disinfecting* barrier. Fresh water in a trap may for a few moments absorb all the foul gases presented to it, but accompanying the absorption at the sewer end, there is, too often,—almost always,—a giving off at the house end. As soon as the water is saturated with the gas, and sometimes even before this, there is a rapid delivery of gas at the house end of the trap ; careful experiments have shown that carbonate of ammonia exposed at the sewer end of a trap will produce its chemical reaction on colored litmus paper exposed at the

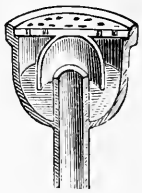


Fig. G

house end within fifteen minutes, and that even the heavier and more poisonous gases so commonly produced in foul drains are all transmitted in their full force within a very short time, —even sufficiently to produce the corrosion of metals exposed at the house end.

The real and effective drain trap is the same as the real and most effective disinfectant ;—a free circulation of common air. Safety is to be sought, not through a shutting out of the foul gases formed in the sewer, and drain, but in the prevention of this formation, by the free admission and circulation of air. This being secured there is little to be apprehended, if the ordinary bent tube filled with water is used as a trap in branch pipes in such a way as to prevent the too rapid transmission of such odors as may still be formed in the pipe. If there is no sufficient ventilation of pipes and sewers it is madness to suppose that we can live safely in rooms which are protected from the invasion of poisonous gases only by water-seal traps.

DRAWERS. (*See* UNDERGARMENTS.)

DREDGING.—This is an important item connected with roasting, and requires a tin box with a perforated lid, called a "dredger." This usually contains *wheat flour* only, but for

some joints the flour is mixed with *grated bread, dried herbs*, or *grated lemon* or *orange peel*. The dredger is shaken over the roast at short intervals, so that its contents remain on the surface and form, with the fat oozing out, a kind of coating, which is sometimes intentionally made very thick, as for hare. But these coatings are not so common now, or so fashionable, as they were a few years ago.

DRESS.—(*See* CLOTHING, *Waist*, *Skirt*, *Princess Dress*, *Cutting and Fitting* and under the other respective names of garments.)

DRILLING.—A kind of coarse, heavy, twilled linen cloth, much used for men's outer clothing in summer. It is a yard wide, and nearly always white or buff-colored. There is also a cheaper variety of drilling made of cotton.

DRINKS. (*See* BEVERAGES.)

DROPS (Lemon.)—Mix together a quarter of a pound of loaf sugar, a quarter of a pound of butter, six ounces of flour, the yolk of one egg, a teasponful of cold water, and a little lemon peel minced fine. Drop lumps of this mixture, the size of a walnut, on a buttered tin plate, and bake it in a quick oven.

Ratafia Drops.—Beat the whites of three eggs to a stiff froth, add ten ounces of powdered sugar, two ounces of bitter and six ounces of sweet almonds, blanched and pounded; mix well, drop in small spoonfuls on white paper; sift powdered sugar over each cake and bake in a quick oven.

DROPSY.—A symptom of numerous diseases characterized by the collection of water or serous fluid in one or more of the closed cavities of the body, independent of inflammation. Dropsy is caused either by pressure upon some part or the whole of the venous system, or by an altered condition of the blood. In the vast majority of cases it depends upon diseases of the liver, the heart, or the kidneys, and in these the original disease must be reached before a cure can be obtained. There is no treatment for dropsy that can be ventured upon without skilful medical advice.

DROWNED. — (To restore the apparently.)—The Royal National Life-boat Institution, after extensive inquiries amongst medical men, medical bodies, and coroners, throughout Great Britain, published (in 1864) the following directions for restoring the apparently drowned. They are founded on those of Dr. Marshall Hall, combined with those of Dr. H. R. Sylvester.

I. Send immediately for medical assistance, blankets, and dry clothing, but proceed to treat the patient *instantly* on the spot, in the open air, with the face downward, whether on shore or afloat; exposing the face, neck, and chest to the wind, except in severe weather, and removing all tight clothing from the neck and chest, especially the braces.

The points to be aimed at are—first and *immediately*, the restoration of breathing; and secondly, after breathing is restored, the promotion of warmth and circulation.

The efforts to *restore breathing* must be commenced immediately and energetically, and persevered in for one or two hours, or until a medical man has pronounced that life is extinct. Efforts to promote *warmth and circulation*, beyond removing the wet clothes and drying the skin, must not be made until the first appearance of natural breathing: for if circulation of the blood be induced before breathing has recommenced, the restoration to life will be endangered.

II. To Restore Breathing. — *To Clear the Throat.*—Place the patient on the floor or ground, with the face downward, and one of the arms under the forehead, in which position all fluids will more readily escape by the mouth, and the tongue itself will fall forward, leaving the entrance into the windpipe free. Assist this operation by wiping and cleansing the mouth. If satisfactory breathing commence, use the treatment described below to promote warmth. If there be only slight breathing, or no breathing, or if the breathing fail, then—

To Excite Breathing.—Turn the patient well and instantly on the side, supporting the head, and excite the nostrils with snuff, hartshorn, and smelling salts, or tickle the throat with a feather, etc., if they are at hand. Rub the chest and face warm, and dash cold water, or cold and hot water alternately, on them. If there be no success, lose not a moment, but instantly—

To Imitate Breathing—Replace the patient on the face, raising and supporting the chest well on a folded coat or other article of dress. Turn the body very gently on the side, and a little beyond, and then briskly on the face, and back again, repeating these measures cautiously, efficiently, and perseveringly, about fifteen times in the minute, occasionally varying the side. By placing the patient on his chest, the weight of his body forces the air out; when turned on the side, this pressure is removed, and air enters the chest. This process is shown in Figs. 1 and 2. (*See next page.*)

On each occasion that the body is replaced on the face, make uniform but efficient pressure, with brisk movement, on the back, between and below the shoulder-blades or bones on each side, removing the pressure immediately before turning the body on the side. The first measure increases the expiration, the second commences inspiration. The result is *respiration* or *natural breathing*, and, if not too late, *life*. Whilst the above operations are being proceeded with, dry the hands and feet, and as soon as dry clothing or blankets can be procured, strip the body, and cover or gradually re-clothe it, but take care not to interfere with the efforts to restore breathing.

Should these efforts not prove successful in the course of from two to five minutes, proceed to imitate breathing by Dr. Sylvester's method, as follows:—

Place the patient on the back on a flat surface, inclined a little upwards from the feet; raise and support the head and shoulders on a

Fig. 1. Treatment of the Apparently Drowned.

small firm cushion or folded articles of dress placed under the shoulder blades. Draw forward the patient's tongue, and keep it projecting beyond the lips; an elastic band over the tongue and under the chin will answer this purpose, or a piece of string or tape may be tied round them, or by raising the lower jaw, the teeth may be made to retain the tongue in that position. Remove all tight clothing from about the neck and chest, especially the braces.

Fig .2. Treatment of the Apparently Drowned.

To Imitate the Movements of Breathing.—Standing at the patient's head, grasp the arms just above the elbows, and draw the arms gently and steadily upwards above the head, and *keep them stretched* upwards for two seconds. (*By this means air is drawn into the lungs.*) Then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest. (*By this means air is pressed out of the lungs.*) This process is shown in Figs. 3 and 4. (*See next page.*)

Repeat these measures alternately, deliberately, and perseveringly, about fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to *induce circulation and warmth.*

3. **Treatment after Natural Breathing has been Restored.**—*To Promote Warmth and Circulation.*—Commence rubbing the limbs upwards, with firm grasping pressure and energy, using handkerchiefs, flannels, etc. (*By this measure the blood is propelled along the veins towards the heart.*) The friction must be continued under the blanket or over the dry clothing.

Promote the warmth of the body by the application of hot flannels, bottles, or bladders of hot water, heated bricks, etc., to the pit of the stomach, the arm-pits, between the thighs, and to the soles of the feet.

On the restoration of life, a teaspoonful of warm water should be given; and then, if the power of swallowing has returned, small quantities of wine, warm brandy and water, or coffee, should be administered. The patient should be kept in bed, and a disposition to sleep encouraged.

General Observations.—The above treatment should be persevered in for some hours;

Fig. 3. Treatment of the Apparently Drowned.

it is an erroneous opinion that persons are irrecoverable because life does not soon make its appearance, persons having been restored after many hours of continued effort. The struggle should not be given over until a physician pronounces death to have unmistakably occurred.

Cautions.—Prevent all unnecessary crowding of persons round the body, especially if in an apartment.

Avoid rough usage, and do not allow the body to remain on the back unless the tongue is secured.

Under no circumstances hold the body up by the feet, or roll it over a barrel.

On no account place the body in a warm bath unless under medical direction, and even then it should only be employed as a momentary excitant.

Fig. 4. Treatment of the Apparently Drowned.

DROWNING.—(To save a person from).—Never approach a drowning person from the front, but take him from behind, by the hair; and never allow him to grasp any part of your body if you can possibly prevent it. Should you find yourself so seized, sink at once to the bottom, when the hold upon you will probably be released. Only a good swimmer should attempt to rescue a drowning man in deep water; for a novice to try it is simply to imperil a second life without reasonable chance of saving the first. Better hasten to secure a rope or pole, which, thrown quickly to the person in danger, will give him a much surer chance of escape. If possible let one going to the rescue have a rope tied under his own arms and held by those on shore. Young swimmers should use especial caution.

DRUGGET.—A coarse woollen cloth of a rather flimsy texture, sometimes made wholly of wool, and sometimes with woof of wool and the warp of flax thread. Drugget is stronger

and has less nap than baize, and, among other uses, is employed instead of carpets for covering floors, or to spread on carpets to preserve them from being damaged; for this purpose it is woven from a yard and a half to two yards and a half wide.

Milled Drugget is printed in bright showy colors, and being very thick and strong serves very well as a substitute for carpets in small apartments. It is manufactured in pieces from a yard to two yards wide.

DRUGS.—In purchasing drugs, whether in the raw state or in the form of extracts, tinctures, etc., it is very important to obtain them from a reputable chemist, who will take care that the article is genuine and properly labelled. The adulteration of drugs is carried on to an enormous extent, and, as commonly sold by irresponsible parties, the strength is seldom above one half of what it ought be. Besides this there is the danger of substituting a cheap drug for a dear one. Drugs are most of them soon spoiled by keeping, and in all cases they should be preserved in well-stoppered bottles—with the exception of Epsom salts, nitre, soda, and some few others, which will keep without injury for an indefinite time. All vegetable medicines lose their virtues in the course of a few months, if not carefully closed from the air; and even in bottles they seldom keep good for a year. It is desirable, therefore, to purchase them in small quantities at a time, and to renew them at intervals of twelve months. Most drugs simply lose their strength with time; but laudanum on the contrary becomes stronger, especially if it be left uncorked; the spirit evaporates, leaving almost pure opium. This must be guarded against, as the most fatal results might occur from giving a dose much greater (in point of strength) than was intended.

Some drugs requiring extended notice are given under separate titles in this work.

The additional ones given below are least liable to abuse, in family use. Each is introduced in alphabetical order with its properties and effects given under the respective heads—(*a*) *Physical properties;* (*b*) *Therapeutical effects;* (*c*) *Use;* and (*d*) *Dose, and mode of administration.* Extracts, tinctures, and all such compounds as will bear keeping, and are likely to be useful in a family, are better when bought of a good druggist than as made at home. They are therefore given without direction to manufacture. It should be borne in mind, however, that drugs of any kind should be used very sparingly except by direction of a physician. *See* WEIGHTS and MEASURES.

Acid, Acetic.—Vinegar distilled from wood, and purified.

(*a*) *Physical properties.*—Limpid, colorless, volatile; odor, pungent and fragrant; taste, acid.

(*b*) *Therapeutical effects.*—Stimulant, escharotic, but when diluted with water, cooling.

(*c*) *Used* in lotions for cooling purposes diluted with water, also in ringworm and removing warts.

(*d*) *Dose.*—It is not given internally, except in combination with other medicines.

Acid, Acetic (*diluted*).—Diluted acetic acid, prepared from the acid just described.

(*a*) *Physical properties.*—A clear acid fluid.

(*b*) *Therapeutical effects.*—Astringent, diaphoretic, cooling, and antiseptic. It is useful in making the acetate of lead more soluble. Externally, it is stimulant in its full strength, or when mixed with water, cooling.

(*c*) *Used* in fevers internally; or as a gargle with capsicum; or as an inhalation in sore throat. A useful lotion when mixed with spirit and water, in bruises, sprains, and burns.

(*d*) *Dose.*—Half a drachm to one drachm.

Acid, Benzoic.

(*a*) *Physical properties.*—White and shining crystals, with flakes of a fragrant aromatic odor, and acid taste. Sparingly soluble in water, but is easily dissolved in alcohol. When heated, is completely evaporated, with an agreeable and peculiar odor; but if the temperature is raised too high, it takes fire, and burns with a yellow flame.

(*b*) *Therapeutical effects.*—Stimulant and expectorant.

(*c*) *Used* in chronic bronchitis.

(*d*) *Dose.*—Five grains to half a drachm twice a day.

Acid, Carbolic (*pure and impure*).—A powerful antiseptic substance, obtained from coal-tar oil.

(*a*) *Physical properties.*—The *pure* anhydrous acid is in long, colorless, prismatic crystals, turning a pale pink on keeping. It rapidly deliquesces in moist air. The *impure* is a more or less brown liquid. Both strongly resemble tar in smell.

(*b*) *Therapeutical effects.*—Strongly antiseptic, antifermentative, and caustic.

(*c*) The *pure* acid is applied on cotton for allaying tenderness and pain in decayed teeth. Being a caustic, it should be carefully kept from touching anything but the tooth; when properly used, it is the best application for toothache arising from this cause, and is indeed a specific.

Dose.—About a grain of the acid is enough for toothache. One drachm of carbolic acid to a pint of water is strong enough for disinfectant purposes.

Acid, Citric, prepared from the juice of lemons.

(*a*) *Physical properties.*—Sharp acid taste, white semi-transparent crystals of a rhomboidal shape. Decomposed by heat; soluble in twice their weight of cold, and half their weight of boiling water.

(*b*) *Therapeutical effects.*—Refrigerant.

(*c*) *Used* in febrile and inflammatory complaints; dissolved in water as a substitute for lemon-juice, and added to soda to form the common effervescing draught.

(*d*) *Dose.*—10 grains to 1 scruple; 15 grains of the acid neutralize 20 grains of bicarbonate of soda, to form the effervescing draught.

Acid, Gallic, prepared from galls.

(*a*) *Physical properties.*—A powder of nearly colorless semi-crystalline appearance; dissipated by heat; dissolves in water and spirit.

(*c*) *Used* in discharges of blood and in diarrhœa, and in other mucous discharges. Also in hemorrhoids.

(*d*) *Dose.*—2 to 5 grains. As an injection half a drachm dissolved in one ounce of water; an ointment, 20 grains are mixed with an ounce of lard, with the addition of 30 or 40 grains of powdered opium.

Acid, Hydrochloric (*diluted*).—Hydrochloric acid, mixed with three times its bulk of water.

(*a*) *Physical properties.*—Taste, intensely acrid and caustic; smell acrid and suffocating; the acid is colorless when pure, but usually is of a straw color, with the presence of peroxide of iron, or nitrous acid.

(*b*) *Therapeutical effects.*—Tonic, antiseptic, and partially diuretic, by promoting all the secretions.

(*c*) *Used*, when combined with diluted nitric acid, in affections of the liver; also with bitters, to prevent the generation of worms; in gargles for sore throat.

(*d*) *Dose.*—20 minims to 40.

Acid, Sulphuric (*diluted*).—Sulphuric acid mixed with about eleven times its bulk of water.

(*a*) *Physical properties.*—Strong acid taste, inodorous, colorless, and transparent. Specific gravity, 1.103.

(*b*) *Therapeutical effects.*—Tonic, astringent, and antiseptic.

(*c*) *Used* in dyspepsia, also to check sweatings, salivation, and diarrhœa; likewise as a gargle.

(*d*) *Dose.*—10 minims to 30, diluted largely (2 drachms to 8 ounces) as a gargle, with honey, sage, etc.

Acid, Tartaric.

(*a*) *Physical properties.*—Colorless imperfect crystals, inodorous, very acid, soluble, largely in water.

(*b*) *Therapeutical effects.*—Refrigerant, antiseptic, diuretic, and slightly aperient.

(*c*) *Used* in fevers, etc., with some soda or potass, as an effervescing draught, instead of citric acid; the proportions being the same.

Æther, Sulphuric.

(*a*) *Physical properties.*—A limpid, volatile, inflammable fluid, without color, produces great cold by evaporation; taste, peculiar, but hot and pungent; sparingly soluble in water, readily so in alcohol.

(*b*) *Therapeutical effects.*—A diffusible stimulant, afterwards narcotic and antispasmodic; externally cooling; when inhaled producing anæsthesia.

(*c*) *Used* in hysteria, faintings, asthma, and other spasmodic complaints.

(*d*) *Dose.*—20 minims to 60, in water.

Aloes, Barbadoes.—The inspissated juice of the cut leaf of the *Aloe spicata*, imported from the Cape of Good Hope and West Indies.

(*a*) *Physical properties.*—Of a dark brown color, and shining resinous surface, with a strong disagreeable odor, and very bitter taste; very difficult to powder, and soluble in diluted alcohol.

(*b*) *Therapeutical effects.*—A stimulating purgative, producing its chief effects on the lower bowels. Apt to produce and aggravate hemorrhoids.

(*c*) *Used* in dyspepsia and in head-affections: also as a common purgative.

(*d*) *Dose.*—One-fourth of a grain to 5 grains, well powdered, or dissolved in hot water.

Alum.

(*a*) *Physical properties.*— A semi-transparent, rough, irregular mass of saline matter. Taste, acid-astringent. Soluble in 18 parts of water at 60 degrees, and in a little more than an equal weight of water at 212 degrees.

(*b*) *Therapeutical effects.*—Astringent and styptic.

(*c*) *Used* internally in hæmorrhages; externally in opthalmia, or as a gargle.

(*d*) *Dose.*—10 grains to 20. As gargle—one drachm to a pint of water.

Ammonia, Liquor of.—Ammonia condensed in water.

(*a*) *Physical properties.*—A stimulating solution. Blisters the skin.

(*b*) *Therapeutical effects.*—Stimulating, diaphoretic, anti-acid, when given internally. Externally, irritant and escharotic.

(*c*) *Used* when largely diluted, in faintings, asphyxia, hysteria, spasms, acidities of the stomach; and externally, as an irritant of the skin.

(*d*) *Dose.*—The aromatic spirits of ammonia is the usual form for internal use. Dose from 15 to 40 minims.

Ammonia, Sesqui-Carbonate of.—Ammonia united with carbonic acid.

(*a*) *Physical properties.*—A mass of irregular crystals, somewhat resembling white sugar, but more transparent and striated. Smell, pungent; taste, sharp and alkaline; soluble in four times its weight of cold water; becomes opaque and friable on exposure to the air.

(*b*) *Therapeutical effects.*—Stimulating, antispasmodic, diaphoretic, and anti-acid.

(*c*) *Used* in dyspepsia, hysteria, and all diseases requiring a rapidly acting diffusible stimulant. Externally, to the nostrils in syncope.

(*d*) *Dose.*—2 grains to 5, in pills or dissolved in any fluid.

Antimony, Potassio-Tartrate of.—Tartar emetic.

(*a*) *Physical properties.*—A colorless, transparent, inodorous, crystallized salt, with a slightly metallic taste. Soluble in fifteen times its weight of cold water, and twice its weight of boiling water; insoluble in pure alcohol, but soluble in proof spirit or wine. The aqueous solution becomes decomposed by keeping.

(*b*) *Therapeutical effects.*—Emetic in large doses; diaphoretic in small ones; expectorant, slightly aperient and alterative; externally applied, produces a crop of pustules.

(*c*) *Used* to evacuate the stomach to slow the circulation, and to produce profuse perspiration. Externally applied in the form of an ointment, to produce counter-irritation.

(*d*) *Dose.*—As an emetic, 1 grain to 4 grains in solution; in pneumonia, ½ a grain to 3 grains, often repeated; as an expectorant, or diaphoretic, ⅛ of a grain to ½ a grain.

Assafœtida, Gum.

(*a*) *Physical properties.*—A mass of irregular pieces, varying in color from red or reddish-brown to white; odor resembling garlic, but more fetid; taste, bitter and slightly acrid; difficult to powder, unless rubbed with carbonate of ammonia. Forms a milky mixture with water.

(*b*) *Therapeutical effects.*—Antispasmodic, expectorant, anthelmintic.

(*c*) *Used* in hysteria, flatulence, colic, etc.

(*d*) *Dose.*—5 to 10 grains.

Bismuth, Trisnitrate of.—The metal bismuth united with nitric acid.

(*a*) *Physical properties.*—A white, tasteless, inodorous powder, very slightly soluble in water.

(*b*) *Therapeutical effects.*—Antispasmodic, stomachic and tonic.

(*c*) *Used* much in dyspepsia, attended with pain of the stomach, and water-brash, and diarrhœa.

(*d*) *Dose.*—5 to 10 grains.

Borax.—Biborate of soda.

(*a*) *Physical properties.*—Sweetish, shining, efflorescent crystals, soluble in twelve parts of cold, and two parts of boiling water.

(*b*) *Therapeutical effects.*—Absorbent, cooling, and alterative.

(*c*) *Used* in intestinal irritation of infants. Externally applied to thrush, and to cutaneous diseases.

(*d*) *Dose.*—5 grains to 30. Externally applied, dissolved in eight times its weight of honey or mucilage, or better, in pure water.

Calomel. *See* MERCURY.

Camphor. A peculiar substance, obtained by distillation from the wood of the *Laurus camphor.*

(*a*) *Physical properties.*—In large white semi-transparent cakes, with a strong peculiarly fragrant and aromatic odor; taste, bitter and acrid; insoluble in water; soluble in alcohol, ether, acetic acid, and the fixed oils.

(*b*) *Therapeutical effects.*—Stimulant, diaphoretic, sedative; externally, soothing.

(*c*) *Used* in hysteria, asthma, chorea, and generally in spasmodic diseases. Externally, in muscular pains, bruises, etc.

(*d*) *Dose.*—3 grains to 5, in pills. When dissolved in water as camphor mixture, the quantity is scarcely appreciable.

Cantharides, Plaster of.—Blistering plaster. Sometimes prepared in the form of a tissue paper, imbued with the active principle.

(*a*) *Physical properties.*—The plaster is a firm preparation requiring the warmth of the hand to enable it to be spread upon leather or calico. It soon spoils by keeping; and if more than a month old should, after spreading, be dusted over with powdered cantharides.

(*b*) *Therapeutical effects.*—To raise the cuticle from the cutis, producing at the same time a large secretion of serous fluid. The time varies from 3 hours to 12, or even more. In babies the blister should always be carefully watched after 3 hours, as it often rises rapidly and would be liable to produce severe ulceration of the skin. Blistering may be promoted by applying a poultice after the removal of the cantharides.

Capsicum.

(*a*) *Physical properties.*—Berries of a red color, and an extremely pungent odor and taste, which is yielded to alcohol, ether, vinegar and water.

(*b*) *Therapeutical effects.*—Stimulant, stomachic, and rubefacient.

(*c*) *Used* in dyspepsia, flatulence; externally, as an ingredient in gargles for relaxed sore throat.

(*d*) *Dose.*—3 grains to 5 grains, in pills; 2 drachms to 8 ounces form the strength for using as a gargle diluted largely with water.

Castor Oil, obtained from *Ricinus communis.*

(*a*) *Physical properties.*—A pale yellow-colored, transparent and viscid oil, with a faint odor and nauseous taste.

(*b*) *Therapeutical effects.*—Mildly aperient.

(*c*) *Used* in colic and in those cases of constipation which will not bear drastic purgatives; also for mixing with gruel for the ordinary enema.

(*d*) *Dose.*—A teaspoonful to one or two tablespoonfuls; an ounce is the proper quantity for mixing with gruel to make an enema.

Cerate.—A species of ointment made rather hard with wax.

(*a*) **Simple Cerate.**—Add 20 ounces of melted wax to a pint of olive oil, and mix while warm, stirring till cold.

(*b*) **Cerate or Spermaceti.**—Melt together eight ounces of white wax and ten of spermaceti; then add a pint of olive oil, and stir together till they cool.

(*c*) **Cerate of Acetate of Lead.**—Melt four ounces of white wax in eight fluid ounces of olive oil; then gradually add four drachms of powdered acetate of lead, previously rubbed with two fluid ounces of olive oil, and stir with a spatula till they unite.

(*d*) **Cerate of Resin.**—Mix together 15 ounces each of resin and wax, and melt them over a slow fire; then add a pint of olive oil, and press the cerate, while hot, through a linen cloth.

Chalk, prepared.—Friable carbonate of lime, rubbed into a fine powder and washed.

(*a*) *Physical properties.*—An inodorous, insipid, white, friable powder, heavy, and insoluble in water.

(*b*) *Therapeutical effects.*—Anti-acid, astringent, and absorbent.

(*c*) *Used* in acidities of the stomach and bowels, and to correct the irritation which is

established in diarrhœa. Externally, as a mild application of sores and burns.

(*d*) *Dose.*—10 to 15 grains.

Camomile Flowers.

(*a*) *Physical properties.*

The flowers are small, with a strong, fragrant odor, and bitter aromatic taste, and some slight degree of warmth. Water and alcohol both absorb the virtues of this plant.

(*b*) *Therapeutical effects.*—Tonic, stomachic and carminative. The warm infusion, when weak, is emetic. Externally soothing.

(*c*) *Used* in dyspepsia, hysteria, flatulence, and also to work off emetics.

(*d*) *Dose* of the powder.—30 to 40 grains twice a day. The infusion—a half ounce to a pint of water—is usually preferred.

Chloride of Zinc.—A combination of zinc with chlorine.

(*a*) *Physical properties.*—In solid piece, snow-white, inodorous, having a strongly styptic and metallic taste.

(*b*) Powerfully caustic, destroying the vitality of the part with which it is in contact, and causing very severe pain. In solution it is used as a disinfectant, appearing to act more energetically than chlorinated soda or lime, with a less disagreeable odor of chlorine.

(*c*) *Used* as a caustic in cancer and fungoid disease. In solution, it is applied to cutaneous diseases, and to mucous membranes, but requires great caution in its use. As a disinfectant, it must be largely diluted. (*See* DISINFECTANTS.)

Chinchona Bark (*yellow*).

(*a*) *Physical properties.*—Larger, thicker, and less rolled than the pale bark. Externally of a brownish yellow, and internally of a cinnamon brown. The fracture is fibrous; taste bitter, and less aromatic than the pale, with scarcely any degree of astringency.

(*b*) *Therapeutical effects.*—Astringent, tonic, antiseptic, and febrifuge.

(*c*) *Used* in typhoid fevers, and in all low states of the system, being in such cases superior to quinine.

(*d*) *Dose.*—10 grains to 50, in wine or wine and water.

Cinnamon.—Bark, oil, and water, used as a warm and cordial spice to prevent the griping of purgatives, etc.

Cod-Liver Oil.—Prepared from the liver of the cod-fish.

(*a*) *Physical properties.*—An oil of three different colors; pale yellow, pale brown, and dark brown. The pale brown appears to possess the highest virtues.

(*b*) *Therapeutical effects.*—Nutritive and acting also on the general system.

(*c*) *Used* largely in consumption and chronic bronchitis to diminish the secretion from the lungs, and arrest, to some extent, the waste incident to these diseases; in nervous affections as a nerve-food, and in some skin diseases; also in other exhausting diseases.

(*d*) *Dose.*—1 drachm carried up to 4 in any convenient vehicle, as infusion of cloves.

Colocynth.—The peeled fruit of the bitter cucumber.

(*a*) *Physical properties.*—A white, soft, porous, medullary substance, investing the seeds with an intensely bitter, acrid, and nauseous taste.

(*b*) *Therapeutical effects.*—Powerfully aperient.

(*c*) *Used*, with warm cordial spices, as an ordinary aperient. (*See* EXTRACTS.)

(*d*) *Dose.*—5 to 10 grains.

Conium (Hemlock).—The leaves of *Conium maculatum*, an indigenous plant.

(*a*) *Physical properties.*—Has a heavy narcotic smell, with a bitter, nauseous, and herbaceous taste; color, dull green; powers soon destroyed by light. Should be gathered just as the plant comes into flower, and dried in the sun, or in a stove.

(*b*) *Therapeutical effects.*—Sedative, narcotic—in some cases alterative, and even tonic.

(*c*) *Used* in scirrhous and cancerous affections externally, and internally for neuralgia and pulmonary complaints; also in scrofulous complaints of children, especially in ophthalmia—in all cases requiring great caution; externally as a poultice, made by scalding the fresh leaves.

(*d*) *Dose.*—2 to 3 or 4 grains.

Copaiba Balsam.

(*a*) *Physical properties.*—A liquid of a transparent yellowish color, and peculiar smell and taste, which is pungent, acrid, and nauseous; when fresh, of the consistency of linseed oil, gradually becoming thicker by exposure to the air, till at last it is as solid as resin; soluble in ether and alcohol.

(*b*) *Therapeutical effects.*—Stimulant, diuretic, purgative in large doses; allays irritation of the mucous membranes, and especially those of the urinary passages.

(*c*) *Used* in chronic bronchitis, spasmodic asthma, whooping-cough, and in chronic inflammation of the bladder, etc.

(*d*) *Dose.*—10 minims to 30 in emulsion, or in the gelatine capsules in which it is sold.

Creasote.—A peculiar liquid prepared from pyroxilic oil.

(*a*) *Physical properties.*—An oily, colorless, transparent fluid, with a disagreeable smell, resembling somewhat the odor of badly-smoked meat.

(*b*) *Therapeutical effects.*—Tonic, stomachic, diaphoretic, antiseptic, and styptic.

(*c*) *Used* internally in phthisis; also in troublesome vomiting, from any cause not readily understood, as seasickness.

Decoction of Chinchona.

(*a*) Boil 10 drachms of bruised yellow chinchona in a pint of water for ten minutes, in a closed vessel, then strain.

(*b*) *Therapeutical effects.*—Antiseptic, astringent, tonic, febrifuge.

(*c*) *Used* in fever, malignant sore throat, dyspepsia.

(*d*) *Dose.*—1½ to 3 ounces twice or thrice a day.

Decoction of Dandelion.

(*a*) Boil 4 ounces of bruised dandelion in 1 ½ pints of distilled water to a pint, and strain.

(*b*) *Therapeutical effects.*—Diuretic, slightly aperient, and specially acting on the liver.

(*c*) *Used* in torpid conditions of the liver, jaundice, habitual constipation, etc.

(*d*) *Dose.*—2 or 3 ounces twice or thrice a day.

Decoction of Iceland Moss.

(*a*) Boil 5 drachms of Iceland moss in a pint and a half of water down to a pint, and strain.

(*b*) *Therapeutical effect.*—Tonic, emollient, slightly astringent.

(*c*) *Used* in consumption and dysentery.

(*d*) *Dose.*—1 to 2 ounces.

Decoction of Logwood.

(*a*) Boil 10 drachms of sliced logwood in 1 ½ pints of water to a pint, and strain.

(*b*) *Therapeutical effects.*—Astringent and tonic.

(*c*) *Used* in diarrhœa and dysentery.

(*d*) *Dose.*—1 ounce to 2 ounces after each action of the bowels.

Decoction of Poppyheads.

(*a*) Boil 5 ounces of bruised poppyheads in 3 pints of water for a quarter of an hour, and strain.

(*b*) *Therapeutical effects.*—Anodyne and soothing.

(*c*) *Used* as a fomentation in painful swellings and inflammation.

Decoction of Sarsaparilla (*simple.*)

(*a*) Boil 4 ounces of sarsaparilla in 4 pints of water to 2 pints, and strain.

(*b*) *Therapeutical effects.*—Alterative, diaphoretic, and tonic.

(*c*) *Used* in cutaneous diseases, chronic rheumatism, and scrofula.

(*d*) *Dose.*—2 ounces, twice or thrice a day.

Decoction of Sarsaparilla (*compound*).

(*a*) Mix 4 pints of boiling decoction of sarsaparilla, 10 drachms of sliced sassafras, 10 drachms of guaiacumwood shavings, 10 drachms of bruised stick-liquorice, and 3 drachms of mezereon bark; boil for a quarter of an hour, and strain.

(*b*) (*c*) (*d*) *Therapeutical effects.*—The same as the last, but warmer, and therefore better suited to weak stomachs.

Dill Water.—Prepared from Dill seeds by distillation.

(*a*) *Physical properties.*—An aromatic odor, with a pungent agreeable taste.

(*b*) *Therapeutical effects.*—Carminative and stimulative.

(*c*) *Used* in the flatulence and gripings of children.

(*d*) *Dose.*—½ drachm to 1 ½ ounce.

Extract of Gentian.

(*a*) Made from the gentian root.

(*b*) *Therapeutical effects.*—Tonic and stomachic.

(*c*) *Used* in dyspepsia.

(*d*) *Dose.*—5 to 20 grains.

Extract of Henbane.—Prepared from the leaves of *Hyoscyamus niger.*

(*a*) *Physical properties.*—An extract of a dingy olive color, and a peculiar, disagreeable smell; taste, bitterish and saline.

(*b*) *Therapeutical effects.*—Narcotic, anodine, and antispasmodic.

(*c*) *Used* instead of opium, in irritability of the nervous system, or mucous surfaces, or in combination with purgatives to prevent their griping, as it does not cause constipation.

(*d*) *Dose.*—5 to 8 grains.

Extract of Hop.

(*a*) *Physical properties.*—A dark-colored bitter extract, without much smell.

(*b*) *Therapeutical effects.*—Tonic and sedative.

(*c*) *Used* in chronic dyspepsia and loss of sleep.

(*d*) *Dose.*—10 to 15 grains.

Extract of Sarsaparilla (*liquid*). Prepared from sarsaparilla, and used for the same purposes as the decoction. It is sold both as a simple and compound extract.

(*a*) *Dose.*—30 drops to 1 drachm two or three times a day in water.

Gamboge.—A gum resin, of a purgative nature, but too powerful for domestic use.

Horseradish (the fresh root).

(*a*) *Physical properties.*—Pungent odor, biting, acrid taste; communicates its active principles partially to water, but completely to alcohol.

(*b*) *Therapeutical effects.*—Stimulant, diuretic, sudorific, emetic.

(*c*) *Used* in paralytic affections and chronic rheumatism.

(*d*) *Dose.*—1 to 2 drachms, cut into small pieces, or made into an infusion.

Infusion of Chamomile.

Chamomile tea.

(*a*) Macerate 5 drachms of chamomile flowers in a pint of boiling distilled water for ten minutes, in a closed vessel, and strain.

(*b*) *Therapeutical effects.*—Tonic, stomachic; emetic, when warm. Externally soothing.

(*c*) *Used* in dyspepsia, and to assist the operation of emetics.

(*d*) *Dose.*—1 to 2 ounces. For emetic purposes, a weaker infusion is used in large quantities.

Infusion of Cloves.

(*a*) Macerate 3 drachms of bruised cloves in a pint of boiling water, in a covered vessel, and strain.

(*b*) *Therapeutical effects.*—Stimulant, stomachic, slightly tonic.

(*c*) *Used* as a vehicle for more active tonics, especially cod-liver oil.

(*d*) *Dose.*—1 ounce to 2 or 3.

Infusion of Gentian (*compound*).

(*a*) Macerate 2 drachms of sliced gentian, 2 drachms of dried orange-peel, and 4 drachms of lemon-peel in a pint of boiling water for an hour, in a covered vessel, and strain.

(*b*) *Therapeutical effects.*—Stomachic and tonic.

(*c*) *Used* in dyspepsia and general debility.

(*d*) *Dose.*—1 ½ to 2 ounces two or three times a day.

Infusion of Linseed (*compound*).
Linseed tea.
(*a*) Macerate 6 drachms of bruised linseed and 10 drachms of sliced fresh liquorice in a pint of boiling water, for four hours, near the fire, in a covered vessel, and strain.
(*b*) *Therapeutical effects.*—Soothing, especially to the mucous passages.
(*c*) *Used* in chronic bronchitis and strangury.
(*d*) *Dose, ad libitum.*

Infusion of Orange-peel (*compound*).
(*a*) Macerate half an ounce of dried orange-peel, two drachms of lemon-peel, one drachm of cloves bruised, in a pint of boiling water, for a quarter of an hour, in a covered vessel, and strain.
(*b*) *Therapeutical effects.*—Stimulant, stomachic, and tonic.
(*c*) *Used* in dyspepsia, and as a vehicle for other remedies.
(*d*) *Dose.*—1 ounce to 2 or 3, at short intervals.

Infusion of Quassia.
(*a*) Macerate 10 scruples of quassia sliced, in a pint of boiling water for two hours, in a covered vessel.
(*b*) *Therapeutical effects.*—Tonic and stomachic.
(*c*) *Used* in dyspepsia.
(*d*) *Dose.*—1½ to 2 ounces.

Infusion of Rhubarb.
(*a*) Macerate 3 drachms of sliced rhubarb root in a pint of boiling water for two hours, in a covered vessel, and strain.
(*b*) *Therapeutical effects.*—Stomachic, tonic, and aperient.
(*c*) *Used* in dyspepsia accompanied with constipation, especially in combination with gentian.
(*d*) *Dose.*—½ ounce to 1½ ounce.

Infusion of Roses (*compound*).
(*a*) Put three drachms of the dried red rose leaves into a pint of boiling water, then add a fluid drachm and a half of diluted sulphuric acid. Macerate for two hours, and strain the liquor; lastly, add 6 drachms of sugar.
(*b*) *Therapeutical effects.*—Astringent, refrigerant, and antiseptic.
(*c*) *Used* as a drink in fevers; also as a vehicle for sulphate of magnesia, quinine, etc.
(*d*) *Dose.*—1½ to 2 ounces.

Infusion of Senna (*compound*).
Senna tea.
(*a*) Macerate 15 drachms of senna leaves, and 4 scruples of bruised ginger in a pint of boiling water for an hour in a closed vessel, and strain.
(*b*) *Therapeutical effects.*—Aperient.
(*c*) *Used* as a vehicle for more active purgatives, which it assists; or by itself as a mild purgative.
(*d*) *Dose.*—1 to 3 ounces.

Ipecacuanha, the root.
(*a*) *Physical properties.*—In pieces of three or four inches in length, with a resinous fracture; an acrid aromatic somewhat bitter taste, slightly nauseous; peculiar odor; yields its active principle to water, spirit, and wine.
(*b*) *Therapeutical effects.*—Emetic, diaphoretic, expectorant, and acting peculiarly on the liver.
(*c*) *Used* as an emetic; also as an expectorant in bronchitis, asthma, etc., as a nauseate in pneumonia, diarrhœa, dysentery; as a diaphoretic in various diseases, and in torpid liver, to promote its proper secretions.
(*d*) *Dose.*—As an emetic, 15 to 30 grains; as a nauseate, 2 to 4 grains; as a diaphoretic, 1 grain, with a small dose of opium; as an expectorant or for torpid liver, ½ to 1 grain.

Jalap, the root.
(*a*) *Physical properties.*—Thin, transverse slices, or round masses; solid, hard, and heavy; dark-gray color, striated appearance; sickly smell; taste sweetish, but nauseous.
(*b*) *Therapeutical effects.*—Actively aperient.
(*c*) *Used* in obstinate constipation, worms, dropsy; requires a carminative to prevent griping and nausea.
(*d*) *Dose.*—10 grains to 30.

Laudanum.—*See* OPIUM.

Liniment of Ammonia.
(*a*) To 1 fluid ounce of the solution of ammonia add 2 fluid ounces of olive oil, and shake together.
(*b*) *Therapeutical effects.*—Stimulant and rubefacient.
(*c*) *Used* in sore throat externally, also to chronic rheumatism, with friction.

Liniment of Camphor.
(*a*) Dissolve 1 ounce of camphor in 4 fluid ounces of olive oil.
(*b*) *Therapeutical effects.*—Stimulant.
(*c*) *Used* in chronic rheumatism, with friction.

Liniment of Camphor (*compound*).
(*a*) Dissolve 2½ ounces of camphor and 1 drachm of oil of lavender in 17 fluid ounces of rectified spirits of wine; then add 3 fluid ounces of the strong solution of ammonia, and shake well together.
(*b*) *Therapeutical effects.*—Stimulant.
(*c*) *Used* with friction in the same way as the simple liniment, but it is more powerful.

Liniment of Turpentine.
(*a*) Shake well together 2 ounces of soft soap, and an ounce of camphor, with 16 fluid ounces of the spirit of turpentine, until mixed.
(*b*) *Therapeutical effects.*—Stimulant.
(*c*) *Used* in paralytic affections and chronic rheumatism; also to burns and scalds.

Liquor of Acetate of Lead.—Sold by the druggists.
(*a*) *Therapeutical effects.*—Sedative and astringent when applied externally.
(*b*) *Used* as a lotion to inflamed surfaces when largely diluted with water. Goulard water is prepared from it, by adding a fluid drachm and a half of it and 2 fluid drachms of proof spirit to a pint of distilled water.

Magnesia, Carbonate of.
(*a*) *Physical properties.*—A solid, white, tasteless, inodorous powder, insoluble in water.
(*b*) *Therapeutical effects.*—Anti-acid and purgative.
(*c*) *Used* in dyspepsia with costiveness, in the

constipation of children and delicate grown persons.

(*d*) *Dose.*— ½ drachm to 1 drachm or 2.

Magnesia, Sulphate of.— Epsom salts.

(*a*) *Physical properties.*—Small pointed crystals of a transparent, colorless appearance; inodorous, with a disagreeable bitter taste; dissolves readily in water.

(*b*) *Therapeutical effects.*— Purgative.

(*c*) *Used* as a cooling laxative, washing the bowels out, but not searching them.

(*d*) *Dose.*— 1 drachm to 1 ounce.

Marsh Mallows.

(*a*) *Physical properties.* A root; long cylindrical; grayish without, white within; inodorous; taste sweetish.

(*b*) *Therapeutical effects.*—Soothing.

(*c*) *Used* to make a soothing drink in irritation of the mucous membranes, or as a fomentation; boiling the leaves and roots to form it.

Mercury, Ammonia-chloride of.—White precipitate.

(*a*) *Physical Properties.*—A white inodorous powder; insipid, insoluble in water and alcohol.

(*b*) *Therapeutical effects.*—Used externally, only; it is detergent.

(*c*) *Used* for cutaneous diseases, and for destroying lice, etc., in its powdered condition.

Mercury, Mild Chloride of.—Calomel.

(*a*) *Physical properties.*— A white semi-transparent crystalline mass, inodorous, insipid, and insoluble. Usually sold as a heavy white powder.

(*b*) *Therapeutical effects.*—Alterative, purgative, and producing absorption.

(*c*) *Used* in chronic diseases of the liver and general torpidity of the stomach and bowels; in dropsy, in combination with other medicines. A most dangerous medicine when employed by those who are not aware of its powerful effects.

(*d*) *Dose.*— 1 grain twice a day as an alterative, 4 to 5 grains as an aperient, combined with, or followed by, some mild vegetable purgative.

Mercury, Nitric Oxide of.— Red precipitate.

(*a*) *Physical properties.*— A powder of a brilliant red color insoluble in water.

(*b*) *Therapeutical effects.*— Stimulant, externally.

(*c*) *Used* to old ulcers, and to heal indolent sores of all kinds, when made into an ointment with lard. (See OINTMENTS.)

Mint-water.— Prepared from peppermint or spearmint. These are sold in the shops.

(*a*) *Therapeutical effects.*— Both are carminative and slightly stimulating. Spearmint-water is also diuretic.

(*b*) *Used* as a vehicle for other remedies.

Mixture of Chalk.

(*a*) Rub ½ ounce of prepared chalk and 3 drachms of sugar with a fluid ounce and a half of mixture of acacia, and 8 fluid ounces of cinnamon water.

(*b*) *Therapeutical effects.*—Anti-acid, absorbent, and astringent when given in diarrhœa.

(*c*) *Used* in diarrhœa.

(*a*) *Dose.*—A tablespoonful every two hours.

Mixture of Iron (*Compound.*)

(*a*) Rub 2 drachms of powdered myrrh and 1 drachm of carbonate of potass with a fluid ounce of spirit of nutmeg; to these, while rubbing, add 18 fluid ounces of rose-water, 2 drachms of sugar, and 2½ scruples of powdered sulphate of iron. Put the mixture in a well-stoppered bottled.

(*b*) *Therapeutical effects.* — Stomachic, astringent, tonic, emmenagogue.

(*c*) *Used* in chlorotic girls, and in all the defective secretions of young females.

(*d*) *Dose.*—1 to 1½ ounce

Ointment of Creasote.

(*a*) Rub half a fluid drachm of creasote with an ounce of lard, until they are incorporated.

(*b*) *Therapeutical effects.*—Stimulant.

(*c*) *Used* in scald head, etc.

Ointment of Galls (*Compound*).

(*a*) Mix 6 drachms of finely powdered galls, 6 ounces of lard, and 1½ drachm of powdered opium.

(*b*) Astringent and anodyne.

(*c*) *Used* for hemorrhoids; but one-quarter of the quantity of gallic acid answers much better.

Ointment of Green Iodide of Mercury.

(*a*) Mix from 30 grains to 1 drachm of green iodide of mercury with 1 ounce of lard.

(*b*) *Used* in scald head, for which it is very efficacious.

Ointment of Nitric Oxide of Mercury.

(*a*) Rub 1 ounce of finely powdered nitric oxide of mercury with 10 ounces of wax, and 6 ounces of lard.

(*b*) *Therapeutical effects.*—Stimulant.

(*c*) *Used* to indolent ulcers.

Ointment of Zinc.

(*a*) Mix 1 drachm of oxide of zinc with 6 drachms of lard.

(*b*) *Used* as a cooling, astringent, and drying ointment.

Olive Oil.

(*a*) *Physical properties.*—A transparent fixed oil, of a yellowish color; inodorous and without much taste.

(*b*) *Therapeutical effects.* — Soothing, and slightly aperient.

(*c*) *Used* in bronchial irritation; also as a vehicle for other medicines in the form of liniment.

(*d*) *Dose.*—1 to 2 drachms.

Peruvian Balsam.

(*a*) *Physical properties.*—Of the consistence of honey; color, brown; agreeable smell, and hot, acrid taste.

(*b*) *Therapeutical effects.*—Stimulant, expectorant; externally applied to indolent ulcers.

(*c*) *Used* in catarrh and chronic rheumatism.

(*d*) *Dose.*—15 minims to half a drachm.

Pill of Mercury.—Blue pill.

(*a*) The metal partially oxydated, and mixed with confection of roses.

(*b*) *Therapeutical effects.* — Alterative and purgative, acting especially on the liver.

(*c*) *Used* in dyspepsia, torpidity of the liver, and constipation.

(*d*) *Dose.*—1 to 5 or 6 grains.

Pill of Rhubarb (*Compound*).

(*a*) Made up of rhubarb, aloes, and myrrh.

(*b*) *Therapeutical effects.*—Laxative.

(*c*) *Used* in dyspepsia and constipation.

(*d*) *Dose.*—Two at bed time.

Pitch, Burgundy.—The impure resin of the Norway spruce fir.

(*a*) *Physical properties.*—A tenacious mass, of fragrant odor, semi-transparent, and unctuous.

(*b*) *Therapeutical effects.* — Stimulant and rubefacient.

(*c*) *Used* externally in the form of plaster in bronchitis, hooping-cough, etc.

Poultice of Charcoal.

(*a*) Macerate for a short time before the fire 2 ounces of bread in 2 fluid ounces of boiling water; then mix, and gradually stir in 10 drachms of linseed meal; with these mix 2 drachms of powdered charcoal, and sprinkle a drachm on the surface.

(*b*) Antiseptic and digestive.

(*c*) *Used* in gangrene.

Poultice of Hemlock.

(*a*) Make a poultice of linseed meal; then add 1 ounce of extract of hemlock previously softened with water, or 4 ounces of the fresh leaves scalded and bruised.

(*b*) *Therapeutical effects.*—Anodyne and discutient.

(*c*) *Used* in glandular swellings and cancerous sores.

Poultice of Linseed.

(*a*) Put into a basin enough meal to form a poultice, making a hole in its centre; then pour upon it boiling water to fill that hole, and stir rapidly with a kitchen knife. This will generally be sufficient to make the poultice of the proper consistency. It is always better to add enough water at first, as it is not so smooth if added piecemeal.

(*b*) *Therapeutical effects.*—Stimulant, and yet soothing.

(*c*) *Used* for abscesses and ulcers when inflamed.

Poultice of Mustard.

(*a*) Make either a bread or a linseed-meal poultice, then sprinkle over it enough flour of mustard to conceal its surface, and wet it with a little boiling water. Some people add hot vinegar to wet it with.

(*b*) *Therapeutical effects.* — Stimulant, and often inclined to blister the skin.

(*c*) *Used* as a rapid counter-irritant.

Poultice of Yeast.

(*a*) Mix 5 ounces of yeast with an equal quantity of water, at 100 degrees; with these stir up a pound of flour, so as to make a poultice; place it by the fire till it swells, and use.

(*b*) Stimulant, emollient.

(*c*) *Used* to indolent abscesses and sores.

Powder of Ipecacuanha (*compound*).—Dover's powder.

(*a*) *Physical properties.* — Compound of opium, ipecacuanha, and sulphate of potass.

(*b*) *Therapeutical effects.*—Diaphoretic, anodyne, and narcotic.

(*c*) *Used* to produce perspiration in rheumatism and dysentery, etc.

(*d*) *Dose.*—5 to 10 grains.

Quinine, Sulphate of.

(*a*) *Physical properties.*—Colorless, inodorous, lustrous, bitter efflorescent crystals, totally soluble in water previously acidulated with sulphuric acid.

(*b*) *Therapeutical effects.*—Stomachic, stimulant, febrifuge, and tonic.

(*c*) *Used* in general debility, neuralgia, and after fever.

(*d*) *Dose.*—1 to 3 grains.

Rhubarb.—The root, whole and powdered.

(*a*) *Physical properties.*—The root is in firm, flattish, irregular pieces, occasionally pierced with large holes; color, bright yellow, externally; odor, peculiar and aromatic; taste, bitter, astringent, and somewhat nauseous; imparts its virtue to water and alcohol. The powder is of a reddish yellow.

(*b*) *Therapeutical effects.* — Purgative and stomachic; acting on the small bowels.

(*c*) *Used* as a mild purgative in the constipation of children and adults.

(*d*) *Dose.*—10 to 30 grains.

Saffron.—(*a*) A coloring matter obtained from the *Crocus sativus*.

Senna.—The leaves.

(*a*) *Physical properties.*—Leaves of a pale green color; leaflets broad, lanceolate; the two sides unequal; odor faint, somewhat like green tea; taste, nauseous and bitter. Yields its properties to spirit and water.

(*b*) *Therapeutical effects.*—Cathartic.

(*c*) *Used* in constipation, and to lower the system. Made into the infusion.

(*d*) *Dose.*—5 grains to 25, rubbed down with ginger and sugar.

Soda, Bicarbonate of.

(*a*) *Physical properties.*—A heavy white powder, without smell, and tasting slightly soapy. Entirely soluble in water.

(*b*) *Therapeutical effects.*—Anti-acid.

(*c*) *Used* in the manufacture of effervescing draughts, and for acidities of the stomach.

(*d*) *Dose.*—5 to 30 grains.

Soda, Sulphate of.—Glauber's salts.

(*a*) *Physical properties.*—Crystals, of an exceedingly bitter taste, and without smell. Soluble in water.

(*b*) *Therapeutical effects.* — Purgative and diuretic.

(*c*) Used in costiveness.

(*d*) *Dose.*—½ to 1 ounce.

Spirit of Ammonia (*aromatic*).

(*a*) *Physical properties.*—A compound, containing carbonate of ammonia and aromatics, with spirit; and possessing an aromatic, warm, and alkaline taste. Miscible with water, which it renders milky.

(*b*) *Therapeutical effects.*-Stimulant and cordial.

(*c*) *Used* as the ordinary diffusible stimulus in faintings and hysteria; also added to senna to prevent griping.

(*d*) *Dose.*—30 to 60 drops.

Spirit of Ammonia (*fetid*).

(*a*) *Physical properties.*—The same as the above, with the addition of asafœtida.

(*b*) *Therapeutical effects.*—Stimulant and antispasmodic.

(*c*) *Used* in hysterical fits.

(*d*) *Dose.*—30 to 60 drops.

Spirit of Horseradish (*compound*).

(*a*) Mix 20 ounces of sliced horseradish, 20 ounces of dried orange-peel, 5 drachms of bruised nutmegs, and a gallon of rectified spirit with 10 pints of water; then distil to a gallon, with a slow fire.

(*b*) *Therapeutical effects.*—Stimulant, diaphoretic and diuretic.

(*c*) *Used* internally in dyspepsia, and in paralysis, externally rubbed into the skin.

(*d*) *Dose.*—1 to 2 drachms.

Spirit of Nitric Ether.—Sweet spirits of nitre.

(*a*) *Physical properties.*—A colorless, transparent, volatile, inflammable fluid, of an ethereal odor.

(*b*) *Therapeutical effects.*—Cooling, diuretic, and diaphoretic; also slightly antispasmodic.

(*c*) *Used* in febrile diseases, dropsy, and spasm.

(*d*) *Dose.*—20 to 60 minims. largely diluted.

Squill.—The sea onion.

(*a*) A root of a pear shape, covered with several thin dry tissues, under which are oval, flaky, red or white scales; odor, pungent; taste, acrid and bitter. Imparts its virtue to vinegar, spirits and water.

(*b*) *Therapeutical effects.*—Expectorant, emetic, diuretic.

(*c*) *Used* in chronic bronchitis and asthma.

(*d*) *Dose.*—2 to 6 grains. Syrup of squills, dose, 1 to 1½ drachms.

Syrup of Iodide of Iron is used in order to preserve the iodide of iron from injury.

(*b*) *Therapeutical effects.* — Alterative, and affording the effects of iron and iodine.

(*c*) *Used* in scrofulous diseases, and in cachectic states of the system.

(*d*) *Dose.*—20 to 40 minims.

Turpentine, Spirit of.

(*a*) *Physical properties.*—A limpid, colorless fluid, of a strong odor and hot taste, exceedingly inflammable.

(*b*) *Therapeutical effects.*—Stimulant, diuretic, cathartic, and destructive to worms.

(*c*) *Used* in hemorrhages, lumbago, etc., and to destroy worms; also externally as a rubefacient.

(*d*) *Dose.*—10 drops to 30 internally, or 2 to 4 drachms mixed with castor oil as a vermifuge; but it should not be given internally without the sanction of a physician.

Tincture of Camphor (*compound.*) — Paregoric elixir.

(*a*) A tincture containing camphor, opium, anise, and benzoic acid.

(*b*) *Used* in coughs.

(*c*) *Dose.*—1 drachm.

Tincture of Ginger.

Dose.—1 drachm.

Tincture of Iodine. (*See* IODINE).

Dose.—5 to 15 minims.

Tincture of Myrrh.

Dose.—30 to 60 minims. Useful as a wash for the teeth. rarely used internally.

Tincture of Opium.—Laudanum.

Dose.—6 to 20 minims.

Tincture of Quinine.

Dose.—teaspoonful.

Tincture of Rhubarb (*compound*).—A very warm, useful preparation.

Dose.—2 to 4 drachms.

Tincture of Valerian (*compound*).

Dose.—30 to 60 minims, in dyspepsia and hysteria.

Tolu, Balsam of.

(*a*) *Physical properties.* — Of considerable consistence; reddish-brown in color; odor, very pungent; taste, warm and sweetish.

(*b*) *Therapeutical effects.*—A stimulant expectorant.

(*c*) *Used* in chronic coughs, and also to wounds and ulcers.

(*d*) *Dose.*—10 grains.

Valerian.

(*a*) *Physical properties.*—Several long, slender, dusky-brown fibres, issuing from one head; strong fetid odor; warm, bitterish, subacid taste.

(*b*) *Therapeutical effects.* — Antispasmodic, tonic.

(*c*) *Used* in hysteria.

(*d*) *Dose.*—1 drachm.

Wine of Iron.

(*a*) Digest for 30 days 2 ounces of Tartarated Iron in a pint of sherry.

(*b*) *Therapeutical effects.*—Stomachic and tonic.

(*c*) *Used* the same as other steel medicines.

(*d*) *Dose.*—two tablespoonfuls.

Wine of Opium.

(*a*) Prepared with opium and spices.

(*b*) *Therapeutical effects.*—Stimulant, afterwards anodyne.

(*c*) *Used* chiefly as an application to the eyes.

(*d*) *Dose.*—10 to 20 minims.

Wine of Potassio-tartrate of Antimony.——Antimonial wine.

(*a*) Dissolve two scruples of potassio-tartrate of antimony in a pint of sherry.

(*b*) *Therapeutical effects.*—Emetic and diaphoretic.

(*c*) *Used* in inflammatory diseases.

(*d*) *Dose.*—15 to 60 minims.

Zinc, Chloride of.—A powerful drug, but scarcely adapted to domestic use, except as a disinfectant, for which it is sold in solution. (*See* DISINFECTANTS.)

Zinc, Sulphate of.—White vitriol.

(*a*) *Physical properties.*—Transparent crystals.

(*b*) *Therapeutical effects.*—Tonic, astringent, and emetic.

(*c*) *Used* as a wash or as an emetic.

(*d*) *Dose.*—As an emetic, 10 to 30 grains; tonic, 2 grains.

Proportionate Doses for different Ages.

Under	½	year	1-15th of a full dose
"	1	"	1-12th "
"	2	"	1-8th "
"	3	"	1-6th "
"	4	"	1-5th "
"	7	"	1-3d "
"	14	"	1-half "
"	20	"	2-3ds "
Above	21	"	the full dose
At	63	"	11-12ths "
"	77	"	5-6ths "
"	100	"	2-3ds "

DUCK. — For suggestions about raising ducks, *see* POULTRY. There are many breeds of ducks which are very fine for the table, among which are the Muscovy, top-knot, Cayuga black; a cross between the common and the Muscovy produces a very large bird at an early age, and is considered the choicest duck. Tame Ducks are always in season but are thought to be in perfection in June and July. Ducklings are in much demand in the Spring when other poultry is scarce. In choosing, select those with supple feet, and hard, plump breasts. Tame ducks have yellow feet, wild ones red.

Wild Duck can be had at all seasons. The choicest is the *Canvas-back* (*see* CANVAS-BACK), *Red-head or Pochard*, *Mallard*, and *Teal*.

There is a wide difference of taste regarding the extent to which ducks should be cooked. Epicures prefer them very rare. The times given in the recipes are those required for thorough cooking. Less time can of course be given as taste requires.

Pie (Duck).—Cut off the wings and neck of a duck; boil it a quarter of an hour; cut it up while hot, preserving the gravy that runs from it; then take the giblets, add a tablespoonful of butter, a blade of mace, six black pepper-corns, two onions, a bit of toasted bread, and a pinch of cayenne pepper; stew these until the butter is melted, then add half a pint of boiling water and let them stew until the giblets are tender; then strain it, and put the giblets into the pie. Let the gravy stand till cold, skim off the fat, and put it with what runs from the duck at the bottom of the pie-dish; then put in the duck well seasoned with pepper and salt, add a tablespoonful of butter in lumps, and cover the whole with a tolerably thick pie-crust. Bake in a moderately quick oven. Cold duck will do as well, if the skin is taken off.

Roast Duck.—In preparing ducks for the spit, be careful to clear the skin entirely of the stumps of the feathers; take off the head and neck but leave the feet on, and hold them for a few minutes in boiling water to loosen the skin which should be peeled off. Wash the inside of the birds by pouring water through them, but merely wipe the outsides with a dry cloth. Put into the bodies a stuffing made like that for turkeys, or simply a seasoning of parboiled onions mixed with minced sage, salt, pepper, and a slice of butter. Cut off the wings at the first joint from the body, truss the feet behind the back, spit the birds firmly, and roast them

Ducks Trussed for Roasting.

at a brisk fire without placing them sufficiently near to be scorched; baste them constantly, and when the breasts are well plumped, and the steam from them draws towards the fire, dish, and serve quickly with a little good, brown gravy poured round them, and some also in a tureen. Tender ducks will take from thirty minutes to a hour to roast.

Roast Wild Duck.—As wild ducks are liable to have a fishy flavor, it is well to parboil them with a carrot or an onion before roasting. Stuff with bread-crumbs, seasoned with salt, pepper, onion and sage; roast as above before a brisk fire, until brown and tender. When the ducks are taken up, thicken the gravy with browned flour, and serve it in a tureen. Serve currant jelly or some other sweetmeat with the ducks.

Stewed Duck.—I. A duck too tough for roasting may be used for this dish, though a tender one is of course best. Cut it up neatly into joints, and arrange these in a wide stew-pan in a single layer if possible; pour in about a quarter of a pint of strong cold beef stock or gravy; skim off the scum when it begins to boil, then throw in a little salt, onion, and sage, and a few thin slices of lemon rind. Simmer the joints gently for three-quarters of an hour, or longer if they are large; then stir into the gravy a tablespoonful of rice-flour (mixed if desired with a wineglassful of port wine); in ten minutes after, dish the stew and send it to table at once.

II. Stewed with Green Peas.—Half roast the duck; skin it, and put it into a stew-pan with a pint of beef gravy, a few leaves of mint and sage cut small, pepper and salt, and half an onion shred as fine as possible. Simmer a quarter of an hour, and skim clean; then add about a quart of green peas. Cover tightly and simmer about half an hour longer. Add a tablespoonful of butter and as much flour, give it one boil and remove from fire; serve with the peas around it on the dish.

Stewed Wild Duck.—Parboil with a carrot or onion for about ten minutes; then cut into joints, put them into a sauce-pan and cover with gravy made of the giblets, neck, etc.; season with salt and pepper, a bunch of sweet herbs, and minced onions, and stew gently for half an hour; or until done. Take up the duck, thicken the gravy with browned flour, and add a wineglassful of wine and a tablespoonful of lemon-juice; boil up once and pour over the duck, and then serve at once.

DUMPLINGS. (Apple.)—I. Pare large ap-

ples; scoop out the core; cover with a thin suet or butter crust, made as for puddings; tie up in a cloth and boil from twenty minutes to half an hour. Or they may be baked. A nice sauce to eat with them, or any dumplings, is made by stirring butter and white sugar to a light paste; the addition of a little wine to this sauce is a great improvement.

II. Take flour, 1 qt.; baking powder, 5 even teaspoonfuls; lard, 2 oz.; salt, ½ teaspoonful; milk, 3 gills.

Mix and roll the crust an inch thick; pile the centre with sour apples pared, quartered and cored; draw the crust over them and pinch it together; turn upside down on a plate, and steam it from three quarters of an hour to an hour.

Currant Dumplings.—For each dumpling take three tablespoonfuls of flour, two of finely minced suet, and three of currants; add a pinch of salt, and as much milk or water as will make a *very* thick batter of the ingredients. Tie the dumplings separately in well-floured cloths, and boil them for a full hour. They may be served with wine same as above. (See Apple Dumpling 1.)

Indian Dumplings.—Scald a quart of Indian meal with boiling hot water; let it stand until cold; then wet your hands in cold water, stir a tablespoonful of salt into the meal, and make up balls, quite hard, the size of a common potato; drop these into boiling water, cover them up, and boil half an hour. They are very nice to eat with gravy of pork or goose.

Lemon Dumplings.—*Take:*–Bread-crumbs, 10 oz.; beef suet, ½ lb.; flour, 1 heaping tablespoonful; lemons, 1 or 2; sugar, 4 oz.; eggs, 3 or 4.

Mix together ten ounces of fine bread-crumbs, half a pound of beef suet chopped very small, a heaping tablespoonful of flour, the grated rinds of two small lemons or one large one, four ounces of pounded sugar, three large, or four small eggs beaten and strained, and finally the juice of the lemons also strained. Divide these into four equal portions, tie them into well-floured cloths, and boil them an hour. These dumplings are extremely light and delicate; if desired *very* sweet, more sugar must be added.

Norfolk Dumplings.—This is an English dish. Take a pound of dough from a baking of very light bread, and divide it into six equal parts; mould these into dumplings, drop them into a pan of fast boiling water, and boil them quickly from twelve to fifteen minutes. When done tear them apart on the top with two forks, and serve immediately. This may be eaten as a pudding, with a rich sauce, or served as an accompaniment to meat. In helping, they must be *torn* apart, *never cut.*

Rice Dumplings.—*Take:*–Rice; apples; marmalade, or jelly.

Cleanse half a pound of rice by rubbing it in a towel; pare and core some sour apples, leaving them whole; put a bit of marmalade or jelly, a clove or bit of lemon peel in the centre; dip each one in water, then roll it in the rice until thickly coated; tie each one in a separate cloth, drop them in boiling water, cover, and boil three quarters of an hour. Serve hot with rich sauce or with sugar and cream. These dumplings are well adapted to those who cannot eat pastry.

Suet Dumplings.—I. *Take:*–Bread-crumbs, 2 cupfuls; beef-suet, 1 cupful; sugar, 1 tablespoonful; eggs, 4; soda, ⅓ teaspoonful; salt, 1 teaspoonful.

Mix together two cupfuls of bread-crumbs wet with milk, one cupful of beef-suet minced very fine, one teacupful of sugar, four eggs, white and yolks beaten separately, one-third of a teaspoonful of soda dissolved in boiling water, and one teaspoonful of salt; add milk enough to make a thick paste. Mould into balls; tie up in dumpling cloths well floured, and boil from *forty to fifty minutes.* Serve hot with wine sauce.

II. (**With Bread.**)—*Take:*–Grated bread, ½ lb; suet, ½ lb; lemon, 1; moist sugar, ¼ lb.; eggs, 2.

Take half a pound of grated bread, half a pound of suet cut small, the juice and grated rind of a lemon, a quarter of a pound of moist sugar, and two eggs. Mix all together, and make into *five* dumplings; boil them in floured cloths *half an hour*, and serve with sweet sauce in the dish.

Yacht Dumplings.—*Take:*–Bread-crumbs ½ lb.; cold milk, 3 gills; butter, 2 oz.; brown sugar, 4 oz; cinnamon, 1 teaspoonful; cloves, ½ teaspoonful; lemon (grated rind), 1; eggs, 3; currants, ¼ lb; raisins (stoned) ¼ lb.; citron, 2 oz.;

Pour two-thirds of the milk over the bread, cover and let it soak fifteen minutes, melt the butter in the rest, and add it with the spice, fruit, sugar and yolks of the eggs; add the whites, beaten to a stiff froth; bake in buttered cups; serve upside down with a thick rich sauce poured over them.

DUTCH SAUCE. (*See* Sauce.)

DUTCHMAN'S PIPE.—A fine climbing plant with large leaves and peculiar flowers. It is hardy, and very easy to cultivate. Plant in the spring by digging a hole two feet in diameter, filling it with rich loam, and setting the roots in the centre. It requires to be watered during hot weather, but will take care of itself in winter.

DYES.—Colors are simple and compound. The simple colors are blue, red and yellow, and cannot be produced by the mixing together of different colors. Compound colors may be produced by mixing together two or more colors in different proportions. Thus, purple is formed by mixing red and blue; green, by mixing blue and yellow; orange, by mixing red and yellow; and the various shades of these depend upon the proportions of the colors so mixed. What is called "giving a ground" in dyeing is communicating one color to a fabric with the intention of applying another upon it, and thus producing a compound color. It is highly important that the water used in dyeing should

be pure ; if it be muddy, or if it contain putrid substances, it will be impossible to procure pure colors by it.

Re-dyeing, even in the practised hands of the dyer by trade, is an uncertain process, and the colors of re-dyed articles are generally very fleeting. Every color will dye black, whether blue, yellow, red, or brown; and black will always dye black again. All colors will take their own colors again ; and blue can be made green or black ; green may be made brown, and brown green ; and any color on re-dying will take a darker shade than its own.

Directions for dyeing leather, including kid gloves, are given at the end of this article. For dyeing feathers, *see* FEATHERS; for staining wood, metals, ivory, bone, horn, and grasses, *see* STAINING.

In dyeing, depth of color and uniformity of tint, with fastness of color are the points principally aimed at. Fastness is determined by the nature of the dye and mordants. A dye is considered fast when it resists the action of soap water, of weak acids, or alkalies, and of light and air. Colors remaining unchanged under all these tests are not common, but all gradations are known. The aniline (or, more correctly coal tar) colors are the most brilliant, but as a general rule are more liable to fade than most of the colors obtained in the old way, by more elaborate processes with weld, fustic, madder, &c. The depth of color usually depends upon the amount of coloring matter used in the dye bath, which must be graduated according to the effects desired to be produced. To attain uniformity of tint practice is necessary. It is usually advisable to cleanse the goods thoroughly before attempting to dye them, and to wet them thoroughly before putting them in the bath. This is best effected by boiling with clean water for a short time, and then wringing them out until they just do not drip. To cleanse goods, boiling in soap suds and rinsing several times in clear water is the best mode. In attempting to dye goods which have already some color, the general rule may be laid down, that the color already on the goods has a tendency to modify whatever color may be afterwards applied, and that some darker color than that already on the goods should be aimed at.

Bleaching may be resorted to in most cases. This may be effected by making a solution, in water (5 oz. to a gallon,) of bleaching powder, to be had at the druggists, in which the goods may be worked for a time, and then putting them in weak muriatic (hydrochloric) or sulphuric acid (one fluid oz. commercial strength to 1 gallon water). If the first treatment is not efficient, it may be repeated, though too frequent an application of these solutions may weaken the fibre. Exposure when moist to the fumes of burning sulphur is another mode of bleaching, though often less efficient. After application of either of these methods, the goods should be rinsed and then boiled for a short time in a weak solution of soda, 1 oz. to 10 gallons of water.

Mordants.—In fixing colors certain substances are used which have an affinity for both the fibre and the dye. These are of various kinds, according to the dye used, or the nature of the fibre to be dyed. For instance wool and silk take most of the coal tar colors without mordant, but cotton goods usually need tannin, or a decoction of the leaves and twigs of the staghorn sumach, to be present in the dye bath; one part of tannin is equivalent to about eight parts of sumach. Cotton goods may be "animalized" as it is termed, by saturating thoroughly with a cold solution of milk curd in ammonia (letting the ammonia absorb all the curd it can), or an albumen solution (white of egg stirred into water, 2 eggs to a gallon), drying and then dyeing hot. After this treatment they will take colors in the same manner as woollen articles.

Oil mordants may be used with silk and cotton goods for fixing madder and coal tar colors. A good oil mordant may be made with 4 parts olive oil, 15 parts alcohol, 2 parts oil of vitriol, and 15 parts hot water. After thoroughly mixing, the goods are immersed and worked in this for 15 minutes, then wrung out and placed in the dye bath.

Copperas (protosulphate of iron), and acetate of iron, made by mixing solutions of "strong" perchloride of iron, and acetate of soda, in the ratio of 7 to 5 by weight, are also used as mordants. The effect of iron mordants is usually to give a lower (sadder) tone to the colors.

Linen has less affinity for colors than cotton. The treatment should be about the same, but the strength of the mordant and the length of time the goods are subjected to its influence should be increased.

Water.—The amount used in the dye bath should be sufficient to allow of working them about with (preferably) a wooden rod, that every part may be uniformly exposed to the action of the solutions. *Two quarts of water suffice for one pound of goods, and less water in proportion for larger amounts.*

Proportions of the materials to be used are given in most cases below, *the amounts indicated being what should be used for ten pounds of goods, in about 5 gallons of water. Generally in working "hot" the temperature should be just under boiling, and the time of steeping should be from twenty to thirty minutes. The stirring should be at least once every four minutes, and would be better if it were constant.*

Coal Tar Colors.—The amount to be used cannot well be indicated, as it depends very much upon the intensity of color desired. Of most of them an ounce will give a fair medium shade to 100 lbs. of goods, or would be enough for 50 gallons of water, hence, as will be seen, it is easier to get too much than too little, as those dyes are very strong. *Particles of undissolved dye, or dyewood chips, &c., should not be allowed to remain in the dye bath while the goods are in it.* The following are a few processes for dyeing the different colors, which may be readily applied.

Black.—The application of aniline black which is the best for cotton, is too elaborate for convenience in domestic use. A process which succeeds best with woollen goods, though it may also be applied to silk, is as follows: Logwood extract (1 lb.) is dissolved in water, heat being applied. When entirely dissolved cream of tartar (5 oz.) is added, and as soon as it is dissolved the goods are introduced and worked once every 3 or 4 minutes, being kept at a temperature just short of boiling for three or four hours or more. They are then taken out, allowed to drain, rinsed once in clean water, and then placed in a bath containing bichromate of potash (5 oz.) where they are worked hot as above for half to three quarters of an hour. Rinsing in clean water, and drying completes the operation.

Blue (Aniline).—For silk no mordant is required. The addition of enough sulphuric acid to the dye bath to make it turn blue litmus paper red, is beneficial, and gives rather brighter shades. For wool sulphuric acid, or sulphuric acid with half as much by weight of white vitriol, may be added to the bath. For cotton, as with silk, sulphuric acid (4 oz.) or alum should be added to the bath. Work hot an hour and let stand till cool.

Blue (Prussian).—Applicable to silk, wool, or cotton. Mix powdered Prussian blue (1 lb.), with a solution of (9 oz.) tartaric acid, (in 3 or 4 gallons of water); then add (14 fluid oz.) strong hartshorn (ammonia,) and work the goods in the mixture hot for about half-an-hour. Hang up the goods to drip and leave them until dry, when they will have assumed a dirty purplish color. Dipping into weak sulphuric acid (1 fluid oz. oil of vitriol to 1 gallon water), will then develop a fine blue color.

Blue (Saxony) for wool. One-half lb. of the best indigo is dissolved in concentrated oil of vitriol, and the solution is then poured into 12 to 20 times its bulk of water. To this bath the goods are immediately introduced, and allowed to remain for twenty-four hours. The excess of indigo separates, settling to the bottom, and may be collected and used over again. Boiling the goods for half-an-hour in a weak solution of sal-soda will then neutralize the acid present and set the color.

Brown.—Silk and wool take aniline, naphthalene and phenyl for Bismarck brown, and also isopurpurate of potash (soluble garnet) in the proportion of the anilines, without mordant. Cotton requires mordanting with tannin before it will take the first two. A brown may be produced on all three kinds of goods by simply boiling with 4 oz. permanganate of potash (chameleon salt).

Green.—Silk and wool may be dyed with iodine green (called also aniline and methyl green), which may be toned with picric (carbazotic) acid, or else they are mordanted with alum (2 oz.), and then dyed with fustic (½ lb. chips), and then with prussian blue as given above. Cotton will take a green dye if treated with a hot solution of tannin (¼ lb. tannin, or 2 lbs. sumach, and iodine green, with a mixture of picric (carbazotic) acid and iodine green, or by dyeing first with fustic (½ lb. chips), and then prussian blue, according to the method given under *blue.*

Orange. — For silk and wool use Manchester (or aniline) orange without a mordant, or (coralline) aniline scarlet with (2 to 4 oz.) tannin, or 1 to 2 lbs. sumach and sulphuric acid. Cotton, silk and wool also take an orange color by working for half-an-hour in a hot solution containing (2 oz.) litharge, with sugar of lead (1½ oz.), and then for 15 or 20 minutes in a bath containing bichromate of potash (1¼ oz.) and sal-soda (1½ oz.)

Red.—Wool and silk take aniline red (magenta), or the so-called *New Rose* (Saffranine), which gives a scarlet without mordants. Magenta with Manchester yellow also gives a scarlet. Cotton requires tannin (2 oz.), or the liquid derived from boiling 1 lb. sumach with 1 gallon water, to be added to the bath to fix these colors. Wool, silk, or cotton may be dyed with madder by mordanting first by boiling ½ to ¾ hour in a bath containing alum (2 lbs.), and cream of tartar (1 lb.), and then keeping at a simmer for 2 hours in a decoction obtained from 5 lbs. ground madder root. Copperas may be used in mordanting instead of the alum, when the color will be more of the *violet or purple* order. With the alum instead of the cream of tartar, sugar of lead (2 lbs.) may be used.

Aniline *scarlet* (coralline, aurine) is applied by first boiling the goods ten minutes with white vitriol (sulphate of zinc, 1¼ lbs.), and then adding a solution containing ¼ lb. of the scarlet, it being weaker than the other anilines, with from ¼ lb. to ½ lb. (depending on depth of shade desired), of sal-ammoniac (chloride of ammonium), keeping in enough ammonia to make its odor perceptible, and boiling from ½ hour to 1½ hours, depending on depth of shade desired. When but little of the dyeing solution is used, or the last boiling is not sufficiently prolonged, a salmon color is obtained. The shade may be toned with magenta afterwards if desired.

Violet.—Aniline violets may be applied direct to silk and wool, without mordant, or with the addition of enough sulphuric acid to turn blue litmus paper red, to the bath. Cotton requires a preliminary mordanting with acetate of iron (obtained by soaking the goods in a mixture of solutions of 7 fluid oz. "strong" perchloride of iron, with 5 oz. crystallized acetate of soda, in 3 to 4 gallons of water, or with tannin ½ lb. (2 lb. sumach.) Work as for blue. *See* RED.

Yellow.—Silk and wool take picric acid and naphthalene (Manchester or Victoria), yellow without any mordant. Cotton may be dyed yellow with fustic (½ lb. chips). Silk, wool and cotton may also be dyed yellow by first working the goods for about half-an-hour in water containing sugar of lead (1 oz.), and then for 15 minutes in a hot solution of bichromate of potash (½ oz.) the addition of sal-soda ½ oz. to 1½

ozs.), to the bichromate solution gives a tone approaching to orange.

Yellow (Nankeen), may be produced by soaking in cold solution of acetate of iron, prepared as described under *violet*. The tone is brownish if the goods are placed in the acetate solution, and then gradually brought to a boil, and yellowish if after working in the cold solution they are first dried and then placed in boiling water, and boiled for 15 minutes.

LEATHER AND SKINS

(including gloves) usually contain tannin, which at once fixes aniline colors, and hence **All Aniline Colors,** soluble in water, may usually be easily applied. Some skins, however, it may be necessary to soak in a decoction of sumach for twenty-four hours before attempting to apply the colors.

Brown. (*See* SCARLET.)

Blue.—In applying the soluble blue, weak sulphuric acid may follow the application of the color to set it, but the use of even moderately strong acids or alkalies has a very deleterious effect upon the strength of the leather or skin, and should therefore be avoided. (*See* STAINING.)

Scarlet (Corallin) may be applied to leather if desired. The addition of one tenth as much borax as corallin to the dye bath brightens the shade. All the colors may be made more brownish by following the dye bath with a solution of bichromate of potash, or still more darkened by a weak nitrate of iron bath. Tawed skins may be immersed in a solution of alum to mordant them, and if it is desired to apply the color to but one side, the color thickened with a little starch, or with borax, may be laid on with a brush. The temperature of a bath for dyeing skins should not be above 90° Fahr.

DYSENTERY.—A disease, most frequent in children, characterized by a constant desire to go to stool, and by small discharges of bloody mucus. There is also considerable fever, griping pain usually near the lower portion of the intestines, causing the child to scream at times as if in fright, and more or less of delirium or cold shivers. The causes of dysentery are indigestible food, unripe or decayed vegetables or fruit, the breathing of impure air, exposure to cold, strong cathartics or purges, and the use of bad or impure water. As soon as symptoms of dysentery are observed in a child, medical aid should be sought at once; but if this is not to be had, proceed thus: If there has been any constipation during the previous day or two, give a moderate dose of castor oil; when the bowels have moved as a result of this, dissolve a teaspoonful of gum arabic in an ounce of peppermint water, and give a teaspoonful every half hour. If this does not succeed, make the following cordial: Take equal parts, by weight, of rhubarb, bi-carbonate of soda (or baking soda will do), and pulverized cinnamon, and mix thoroughly; of this put a teaspoonful into a cup, add about a gill of boiling water, cover, and let it stand till cold; then pour off from the dregs, add an equal quantity of peppermint water containing the gum arabic, sweeten with a little loaf-sugar, and give a tablespoonful (if the child is ten years old, half as much if less than five), every twenty minutes until the character of the discharges is changed. But the treatment most to be relied on is this: Make a little thin starch, and to one tablespoonful of this add one drop of laudanum, inject it into the child's bowels with a small syringe, and keep it there as long as possible; this should be repeated every four hours until the disease is arrested. Increase the quantity of laudanum by one drop for each year of the child's age up to five. From the first the child should be kept as quiet as possible, as rest and warmth and a recumbent posture are essential to comfort and recovery.

Often great relief for the patient is obtained by employing, twice in twenty-four hours, injections containing one half a grain of nitrate of silver to the ounce of water.

Dysentery is infectious by evacuations, and therefore all bed-pans or other vessels used by the patient should be scalded each time with boiling water. The privy-vaults and water-closets should also be disinfected with sulphate of iron or carbolic acid. (*See* DISINFECTANTS.)

In adults, when dysentery makes its appearance, if any constipation has previously existed, a dose of castor oil, to which a few drops of laudanum have been added, may be given; opiates and astringents may afterwards be administered. During the treatment the patient should be confined to his bed; and his diet should be of the mildest and most unirritating character. When dysentery passes into the chronic stage, the stools become more copious and loose, and are found to contain pus; the complaint is apt to be tedious and intractable, and even after recovery the digestive organs remain for a long time feeble and irritable.

DYSPEPSIA.—This disease, as its name indicates, signifies difficult digestion, and of course can only be cured by attention to whatever promotes, and avoidance of whatever hinders, the proper digestion of food. The rules which we have laid down in the articles on DIET and DIGESTION apply here; and as timely observance of them would render dyspepsia impossible, so also it is in that direction that relief must be sought, for in most instances medicines can only work harm. In a common class of cases, when dyspepsia has been long continued, a certain degree of inflammation of the gastric mucous membrane seems to be produced; the presence of food excites pain, which continues so long as the food remains in the stomach, and carminatives or stimulants, so far from affording relief, aggravate the distress. In such cases the diet must be of the

blandest and most unstimulating kind, and the amount of food rigidly limited; restricting the patient to milk, diluted with an equal part of lime-water, is sometimes attended by great benefit, and farinaceous articles are preferable to meat. In another and the larger class of cases, there is neither inflammation nor irritation present, but the powers of the stomach seem enfeebled; here stimulants relieve the distress, and cause at least temporary improvement. In such cases it agrees better than an exclusively farinaceous one, and the patient is benefited by the use of bitter tonics, such as gentian, quassia, etc. *No medicine, however, should be taken for dyspepsia without a physician's advice.* Change of air, change of scene, change of society, and change of diet, are particularly beneficial in this disease.

E

EAR.—This is a very delicate organ, and should be treated with great caution. Almost the only thing that is safe is to wash it daily, internally and externally, with water only, as far as a towel wrapped around the finger can reach. The practice of using ear-picks is always dangerous and often causes deafness; and fails, moreover, to accomplish its object. The wax is nature's medium for protecting the ear, and when left to itself dries up into thin scales which peel off one by one from the surface of the passage, and fall out imperceptibly, leaving a perfectly smooth, clean surface. In health the passage of the ear is never dirty; but in attempting to clean it we infallibly make it so. The insertion of a pick, or screwed up towel-end, or any solid thing, beside the imminent risk of rupturing the membrane, only drives the wax down upon the membrane and by irritation increases the secretion. Often it is not only deafness which ensues, but pain and inflammation, and then matter is formed which the hard mass prevents from escaping, and the membrane becomes diseased, and worse may follow. Another source of injury to the ear arises from the very precautions taken against injury. Nothing is more natural than to protect the ear from cold by putting a piece of cotton wool in it; and this is most useful if done only on occasions of exceptional exposure, as when a driving storm has to be encountered, or when one side of the head is exposed to the force of a cutting wind. But it is astonishing in how many cases the cotton thus used, instead of being removed when the need for it has passed, is allowed to remain, and gets pushed down into the passage, causing much mischief. The way to avoid this accident, besides being careful not to forget, is to use a large piece of the wool and to place it over, rather than in, the passage. It should be remembered, however, that such things should be resorted to only on special occasions, and that constantly covering up the ear is certain to prove injurious; it is better that air should always have free access to it.

All sorts of substances are sometimes put into the ear by children, who do it to themselves or each other, in ignorant play. In such cases the chief danger lies in undue haste and violence in applying a remedy. The foreign bodies should be removed by syringing the ear with warm water alone. No attempt should be made to lay hold of them or move them in any other way, or the membrane may be injured. It is important that the substance should be removed as speedily as is quite safe, but there need never be impatience, nor should discouragement be felt if the syringing has to be repeated several days before it effects its end. It will almost invariably succeed if persisted in, and is most effective if the ear is turned downwards and syringed from below. When there is much pain, medical assistance should be called.

It is very rare that earwigs or other insects get into the ear, but when they do they cause great pain. The best way to get rid of them is to pour a little olive or sweet oil into the ear. and let it remain till the insect is smothered.

EAR-ACHE.—No pain is much more severe than this, it being frequently remembered as the great suffering of childhood. Sometimes it is apparently caused by some exposure to cold air; and a sufficient remedy in such case is often found in merely warming a bit of cotton and placing it gently in the passage, thus shutting out the cold air. If this does not afford relief, a little sweet oil may be warmed in a spoon and half as much paregoric then be mixed with it; of this a drop or two may be allowed to run down into the ear and the pain will in many cases cease. When the pain is very acute and obstinate, fill the ear on the painful side with laudanum that has been warmed by standing the bottle for a few minutes in warm water, and then plug it with a little wool or lint. To do this properly the patient should lay the head on a table, with the aching side upwards; no fear need be entertained of putting too much laudanum in, as it will do no harm. Warm water, as warm as the patient will bear it, used in the same way, and frequently repeated, is the favorite remedy with professional aurists.

EARTH-CLOSET.—In many cases it happens either that water cannot be obtained in sufficient quantities for cleaning the drain, or that it cannot be carried away with the deposit of the closet to a situation where it will not be injurious to health. The latter is especially the case in small towns and villages where there are no efficient sewage arrangements, and where the sewage is either carried into open ditches or cesspools, or into covered pits. All these are objectionable as being injurious to the health either of the inmates of the house to which the cesspool or pit belongs, or to the neighboring inhabitants. The injury is done

either by noxious vapors thrown off from the open pits, or by soakage of their liquid contents into adjacent wells or water-courses. To avoid these defects a dry earth closet, invented by the Rev. Henry Moule, of Dorsetshire, England, has been introduced, which forms one of the most useful and valuable of recent additions to the convenience of the household. It is based on the principle that by covering the fœcal deposit immediately with dry earth containing a certain proportion of clay, not only is the smell otherwise arising from it destroyed, but all noxious vapors whatever cease to be given off, being absorbed and neutralized by the clay, which it is well known has that peculiar property.

The closet consists essentially of a mechanical contrivance, attached to the ordinary seat, for measuring out and discharging into the vault or pan below a sufficient quantity of the sifted dry earth to entirely cover the solid *ordure*, and to absorb the urine. The discharge of earth is effected by an ordinary pull-up, similar to that used in water-closets, or, in the self-acting apparatus, by the rising of the seat when the weight of the person is removed.

The vault or pan under the seat is so arranged that the accumulation may be removed at pleasure. From the moment when the earth is discharged and the evacuation covered, all offensive exhalations entirely cease. Under certain circumstances there may be, at times, a slight odor as of guano mixed with earth; but this is so trifling and local that a commode arranged on this plan may, without the least annoyance, be kept in use in any room.

If possible, there should be a small pipe, from three to six inches in diameter, leading from the space under the seat to a flue adjoining the kitchen fire flue. This secures the best kind of ventilation.

In using the earth-closet the following instructions should be carefully attended to:—

See that the reservoir is supplied with earth of a suitable nature.

Let one fall of earth be in the pail before using.

The earth must be dry and sifted. Sand must not be used.

No "slops" must be thrown down.

The handle must be pulled up with a jerk, and let fall sharply.

EARTHEN-WARE.—The various wares known as earthen-ware, china, or porcelain, are all compounds of clay with bone-earth, flint, and other similar materials, ground together and baked. According to the proportion of clay will be the toughness of the china, and the capability of being moulded, while the flint and bone-earth gives hardness, whiteness, and transparency.

There are two main divisions of table-ware—glazed earthen-ware and china or porcelain. Nearly all are originally white, and sorted after baking. The finer only are then decorated and re-baked. When glazed earthen-ware chips, the exposed surface becomes dark; in porcelain it remains white.

The finer Oriental china and that of Sévres and Dresden costs from $300 up, for a set for twelve persons. The sets generally are for eighteen. The ordinary decorated French china costs from $45 to $500 per set. The white French china costs from $35 to $500, depending on quality. The decorated English china costs from $350 up. Broken pieces cannot be duplicated here, as the decoration is printed on, from designs more elaborate than the hand-work of the average French sets. The French can be duplicated here at a few weeks notice. The English is heavier and much more durable. Both the French and the English make a decorated glazed earthen-ware that is very durable—more so than French china, and possibly than English china. It costs from $70 to $125 per set; the various pieces can generally be bought separately, which is not the case with decorated china. For economy, plates and cups of this ware with tureen, vegetable dishes, etc., of plated silver is probably the best possible arrangement. Still further variety in this or any service is desirable, and may be had through pickle dishes, compotiers, etc., of other kinds of ware.

The so-called *Ironstone* and *Stone China* are merely glazed earthen-ware undecorated. Sets cost from $20 to $40. As regards the finer porcelain, the following remarks may be of service:—

Oriental China is remarkable for its close texture, its flinty hardness, fine surface, and capacity for bearing heat. It is supposed to take from ten to twenty years to get some of these wares into a state fit for baking. They are generally very expensive, but extremely durable.

Dresden China is finer in outline than the Oriental, and the best kinds are fully as durable.

Sevres China is of French manufacture and is not so close or fine in the grain as those above alluded to; but it has a superior glaze, and is generally of elegant shape, with beautiful colors and magnificent gilding.

The common *Red Earthenware* is that used most extensively for cooking, dairy, and other purposes. It does not stand the heat well, and is very easily broken. Acids should never be put into any vessels made of this ware, as there is a poisonous ingredient in the glazing which the acid takes off. The common stone-ware is stronger, and cleaner, and better every way than any other kind.

For instructions about mending broken earthenware, *see* CEMENTS.

EAU DE COLOGNE. (*See* COLOGNE.)

EEL.—There are several varieties of eels, some being taken in salt water and some in fresh. The common eel is a very sweet and savory fish, and is plentiful in the markets throughout the year; those taken from the seashore are preferred, as they are generally

in the best condition. The *silver eel* is considered the finest of the eel species, and the color, even when skinned, has somewhat the appearance of silver. They are in season from April to November. As an article of food, eels are extremely rich and nutritious; but on account of the large quantity of oil which they contain, they are apt to cause derangement of the digestive functions if eaten too liberally without using some condiment as a corrective. In cooking eels, reject the large ones and take those weighing about one pound each. Before skinning them, cut off the head, or divide the spinal column just behind the head; this renders suffering on their part impossible.

Sand-Eel.

Boiled Eels.—Pare a lemon, and strip from it entirely the white inner rind; slice it and remove the seed with care; put it, with a blade of mace, a small half-teaspoonful of white peppercorns, nearly a teaspoonful of salt, and a moderate sized bunch of parsley, into three pints of cold water; bring them gently to a boil, and simmer them for twenty minutes; let them become quite cold; then put in three pounds of eels, skinned and cleaned, and cut into lengths of three or four inches; simmer them very slowly from ten to fifteen minutes, lift them into a very hot dish, and serve with good Dutch sauce, or with parsley and butter acidulated with lemon-juice.

Fried Eels.—Skin, empty, and wash them as clean as possible; cut them into four-inch lengths, and dry them on a soft cloth. Season them with fine salt, and white pepper or cayenne, flour them thickly, and fry them to a fine brown in boiling lard; drain them well before placing in the dish, and send to the table with plain melted butter, or anchovy sauce. Eels may also be dipped into batter and then fried; or into egg and fine bread-crumbs (mixed with minced parsley or not, at pleasure).

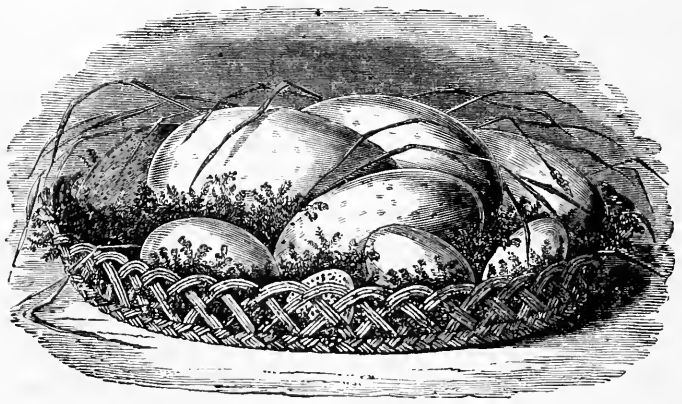
It is an improvement on these modes of dressing eels to open them entirely, and remove the bones; the smaller parts should be thrown into the pan a minute or two later than the thicker portions of the bodies, or all will not be equally done.

Broiled Eels.—Skin the eels and cut them open down the back, and then remove the bone. Steep them in oil, pepper, salt, and vinegar for about two hours; then dip them in bread-crumbs, and afterward into melted butter. Broil them over a clear fire, and send them to the table with tartar sauce.

Stewed Eels.—Skin and clean, and cut out all the fat from the inside; cut into lengths of about two inches; put them into a saucepan with enough cold water to cover them; cover closely, and stew for an hour. Then add a tablespoonful of butter, and a tablespoonful of flour stirred into half a teacupful of cold water; season with pepper, and serve in a deep dish.

Tartar Eels.—Skin the eels, cut them into two-inch lengths, and boil them in savory gravy or broth that has wine in it, with a little salt. When cold, take them out, drain them, and dip them in a mixture (half and half) of melted butter and uncooked egg-yolk; then roll them in bread-crumbs till they are well and equally covered; lay them on a gridiron till they are well heated throughout and nicely browned on the outside. Serve on a layer of tartar sauce at the bottom of the dish.

EGGS.—According to Baron Liebig there is more nutriment in an egg than in anything of equal bulk that exists in nature or that chemistry can produce; and among all nations they



are a favorite article of food. In this country they may be considered as being in season the year round, though in the spring months they are more plentiful and cheap; during the winter, and especially at the holiday season, they are usually quite scarce and high.

The freshness of an egg may be tested by putting the large end to the tongue, when, if it feels warmer than the other end, the egg is considered fresh. Another test is to hold the egg up against the sun; if the outline of the yolk can be distinctly traced, and the white looks clear around it, the chances are that the egg is good. The surest test, however, is to place the eggs in a pan of cold water. The fresh egg will sink quickly to the bottom, those that sink very slowly are suspicious, and those that float are very likely to be bad.

To preserve eggs for a few weeks, pack them in bran or salt, with the small end downward; their chances will be improved by previously greasing them well with linseed oil or dipping them in a weak varnish. When it is desired to keep them longer, pour a gallon of water upon a pound of quicklime in a jar; let it remain about 24 hours to cool after the effervescence; procure eggs as fresh as possible and drop them into the jar gently. Place the jar where the eggs can be taken out without moving it, and they will keep good for a twelvemonth. A popular French method is as follows: Dissolve four ounces of beeswax in eight ounces of olive oil; dip the tip of the finger in this and anoint the egg all around. The oil will be immediately absorbed by the shell and the pores filled up with the wax. It is claimed that by this method the eggs, if kept in a cool (but not cold) place, may be preserved fresh for two years.

Baked Eggs.—Break the desired number of eggs into a buttered dish, taking care to keep each whole and the yolks separate from each other; dust with pepper and salt, and place half a teaspoonful of butter upon each; put into a moderate oven and bake until the whites are solid. Serve hot, with buttered toast.

Balls (Egg) for Soups.—Boil four or five eggs for ten or twelve minutes, and lay them in fresh water until they are cold. Take out the yolks, and pound them smoothly with the beaten yolk of one raw egg, or more if required; add a little salt and cayenne, roll the mixture into balls the size of marbles, and boil them for two minutes. Half a teaspoonful of flour is sometimes worked up with the eggs.

Boiled Eggs.—Be sure that the water is actually boiling; put the eggs in gently one by one with a spoon so as to avoid cracking them; boil steadily *three minutes* if they are wanted soft—*ten minutes* if wanted hard. A favorite method with gourmands is to put the eggs on in cold water and let it gradually come to a boil, which will be in about ten minutes. The inside, white and yolk, will then be of the consistency of custard.

Cooked (Eggs) without boiling.—First put some boiling water into a large bowl or basin and let it remain for a few seconds; then turn it out, lay in a couple of eggs, and roll them over to take the chill off the shell that they may not crack from the sudden application of heat; pour in upon the eggs *boiling* water from the kettle, until they are completely covered; put a plate over them instantly, and let them remain upon the table for twelve minutes, when they will be found perfectly cooked, entirely free from all flavor and appearance of *rawness*, and yet so light and delicate as to suit even persons who cannot eat eggs at all when cooked in the usual way. The eggs should be turned when rather more than half done, but the plate must be replaced as quickly as possible. More than two eggs will require from 15 to 20 minutes instead of 12.

Fricasseed Eggs.—Take half a pound of stale bread and a pint of milk; place them in a sauce-pan on the fire and boil for three minutes, mash well and mix the two together, then boil them, stirring continually, until they make a rather thin paste; remove this, mix with it six or eight boiled eggs, season with salt and pepper, put back on the fire, stir constantly for five minutes or so, and serve hot.

Fried Eggs.—I. Put plenty of butter or lard into a frying-pan, and when it is boiling hot, break the eggs in gently one by one (being careful not to break the yolks); fry them three minutes, or until the white part becomes hard, and take up with a skimmer; dust over with salt and pepper, and serve hot.

II. (*In batter*).—Poach the eggs (not hard); set them aside to drain and cool on a clean napkin. Make ready a deep frying-pan, and when the fat is hot, fry enough parsley to cover the bottom of your dish. Dip the eggs in batter with a spoon, sprinkle them slightly with fine-chopped parsley, and fry; when a light brown, they are done. Arrange them on the bed of fried parsley, and sprinkle with lemon-juice.

Ham and Eggs.—Fry the eggs as above; drain them thoroughly, and lay each separately on a piece of fried ham. The ham should be cut in appropriate slices before dishing. Garnish with sprigs of parsley.

Mashed Eggs.—Put a little good gravy or dripping from roast beef, veal, or pork, or a little good soup, or a large lump of butter, into a stew-pan. When hot, break in the required number of eggs, stirring constantly. Season slightly with pepper and salt, and cook quite gently until the eggs become stiff.

Omelette. (*See* OMELETTE.)

Poached Eggs.—Have a large frying-pan two-thirds full of boiling water into which about a tablespoonful of salt has been thrown. Place it where the boiling will cease, then break the shells of the eggs one by one on the edge of the pan; hold them over the boiling water, close to the surface; open the shell adroitly with your two thumbs, and let its contents slide into the water in as entire a mass as possible; keep each egg separate in the water, to prevent their sticking together; if the yolk of an egg is broken it is spoiled for serving. Let the water simmer gently until the white of the egg sets, then take out with a perforated skimmer, and place each egg on a piece of buttered toast.

Poached eggs on toast, served with Worcestershire sauce, make one of the most delicious of breakfast dishes.

Sauce (Egg.)—I. Boil four eggs for quite 15 minutes; then lay them into cold water and let them remain until perfectly cold. Break the shells by rolling them on a table, and pick off the pieces; separate the whites from the yolks, and divide all of the latter into quarter-inch dice; mince two of the whites tolerably small, mix them lightly with the yolks, and stir the whole into a third of a pint of melted butter or white sauce. Serve as hot as possible.

II. Boil two eggs hard, and when quite cold, cut the whites and yolks up separately; mix them together, put them into a very hot tureen, and pour over them a quarter of a pint of drawn butter (while it is boiling). Stir, and serve immediately.

Scrambled Eggs. — Put in a frying-pan enough butter to grease the bottom of the pan; break in the eggs carefully, without breaking the yolks; for each dozen eggs, add a tablespoonful of butter; season with a very little pepper and salt; when the whites harden slightly, stir the eggs from the bottom of the pan, and continue to do so until they are sufficiently cooked. When done, the yolks and whites should be separate, though stirred together—*marbled*, in fact, and not *mixed* like mashed eggs.

Stuffed Eggs.—Cut six hard-boiled eggs in two lengthwise; lift out the yolks and mince them up fine with six or eight sprigs of parsley; add three ounces of butter and a slice (the size of a saucer) of the soft part of bread, soaked in milk and squeezed; season with salt, pepper, and a little grated nutmeg; mix the whole together thoroughly. With this mixture fill the cavity in the whites whence the yolks were taken; set these in a pan with a layer of parsley, or spinach, on the bottom; place for ten minutes in an oven, and serve warm.

EGG-FLIP.— *Take:*–Eggs, 2; ale, ½ pt; white sugar, 1½ oz; nutmeg and cloves.

For each ½ pt of the flip desired to be made, take two eggs, and beat them up thoroughly with an ounce and a half of white sugar and a little powdered nutmeg and cloves. While doing this, heat half a pint of ale (a little brandy may be added if the ale is not strong enough); and when boiling hot stir it into the eggs, after which pour the whole backwards and forwards from the sauce-pan into a bowl and *vice versa* until it thickens. If, from the coldness of the atmosphere, this does not take place, it must be put on the fire again and constantly stirred until it does, which never fails in a few minutes.

EGG-NOGG.—*Take:*–Eggs, 5; sugar, 5 tablespoonfuls; milk, 1 qt; best brandy, ½ pt; nutmeg.

Stir the sugar and the yolks of the eggs together; add the milk; then the brandy; and lastly stir in the whites of *three* eggs, which should previously have been whipped up stiff. Flavor to taste with grated nutmeg.

EGG PLANT.—This vegetable is called "guinea-squash" at the South. It is cultivated exactly like the tomato, to which it is related (which see), or like the squash. There are several varieties of the egg plant, of which the large, purple, oval-shaped kind is best for the table. When fried, they have a taste resembling that of the oyster, and they are much used in soups, stews, etc. The white variety is much smaller, about the size and shape of a goose-egg, and but seldom used, being grown rather for ornament than utility. The egg plant is in season from June to October.

Fried Egg Plant.—Select the large purple kind, and one which feels firm when pressed; cut it crosswise into rather thick slices, pare the skin off, and place them to soak for half an hour in strong salt and water; wipe each slice dry with a napkin, dip it in egg, and then in cracker-crumbs, and fry in hot lard until of a nice crisp brown.

Stewed Egg Plant.—Put in a pot and stew till soft; after removing the skin, mash it with butter and sweetherbs; put it in a pan, grate bread over the top, and bake in a moderate oven till brown.

Stuffed Egg-Plant.—Soak a piece of the soft part of bread in cold water, and then squeeze the water out of it. Parboil the egg plants ten minutes, split them in two lengthwise, and scrape out the seeds. Put a piece of butter in a sauce-pan, and when melted fry in it a bit of chopped onion; when the onion is fried, stir in the soaked bread; add salt, pepper, and grated nutmeg to taste, and a little gravy; stir together for about one minute, and then remove from the fire. Fill both halves of the egg plants with this mixture, and put them in a pan with the mixture upwards; dust with bread-crumbs, put a teaspoonful of butter on the top of each, and bake till brown. Serve hot.

EGLANTINE.—A name for the sweet brier, a well-known and delightfully flagrant-leaved rose. It grows wild in rich pastures and neglected fields throughout the United States, and in favorable soil sometimes sends up shoots ten or twelve feet high, covered with harsh, crooked prickles. It succeeds well in the garden if ample room and a deep rich soil are allowed it, and in such cases it sometimes produces double flowers. Eglantine grows readily from the seeds, and sown in rows, the plants can be clipped into shape to form low and ornamental hedges. Plant in early spring. The flowers, which are borne most profusely on the lower branches, are of a beautiful rosy color, and full of fragrance; but the chief perfume of the plant is in the foliage, its leaves being covered with russet-colored glands, which, when slightly bruised, emit a peculiar scent.

EIDER-DOWN. (*See* DOWN.)

ELDERBERRY.—This is the fruit of the elder-tree which is found generally in damp places, near streams of water and along the shady side of old walls and fences. The berries are small, black, and of a pleasant flavor when ripe, and are used for making pies, etc., the well-known *Elderberry wine*, which is a wholesome and agreeable beverage, and for feeding birds. Infusions of the flowers make the *Elder flower tea*, which is a powerful pro-

moter of perspiration and of cuticular secretions. The berries are in season in August and September, and can generally be procured in the markets.

Elderberry Wine. — *Take :*–Elderberries (ripe); water; sugar; cloves; ginger; yeast.

Select ripe and fresh berries, strip them clean from the stalks, and measure them into a tub or large earthen jar; pour boiling water upon them in the proportion of two gallons to three of berries, press them down into the liquor, cover them closely, and let them stand until the following day; then strain the juice from the fruit through a sieve or cloth, and when this is done squeeze from the berries the greater part of the remaining juice; mix it with that which was first poured off, measure the whole, and for every gallon add three pounds of sugar, three-quarters of an ounce of cloves, and one ounce of ginger; boil twenty minutes, keeping it thoroughly skimmed, and remove from the fire. When about milk-warm, put it into a perfectly dry and sweet cask, fill this entirely, and pour very gently into the bunghole a tablespoonful of new yeast mixed with half a teacupful of the wine. When fermentation ceases, paste a stiff brown paper over the bunghole; after that it will be fit for use in about eight weeks, but will keep for years.

II. *Take :*–Elderberries; water; sugar; raisins; brandy (if wanted).

Take elderberries that are quite ripe, put them into a pan and bake them in an oven along with the bread; then strain the juice from them. To six gallons of water put three pounds of moist sugar, boil it one hour and strain it; when it is cool, add one quart of the elder-juice, to every gallon of liquor; spread a toast thickly with yeast, put it in, and let it stand for a week; then put the wine into a cask, and for every gallon add one pound of raisins. A pint of brandy to every three gallons of wine will be an improvement.

III. (White Berries.)—*Take :*–White elderberries; lump sugar; yeast; Malaga raisins; lemons.

To a quart of white berries add a quart of water, boil it half an hour, press it through a sieve, but do not press the berries; to each gallon of this liquor put three pounds of lump sugar; let it boil, skim it, and when milk-warm work it with a tablespoonful of yeast for five days, stirring it two or three times a day; to five gallons of the liquor put three pounds of Malaga raisins, chopped; put the whole into a cask which has been previously washed with brandy; stop up the bunghole when the wine has done working, and to each gallon add the rind and juice of a lemon.

Elder-Flower Wine.—*Take:*–Elder-flowers; water; sugar; yeast.

To every gallon of water put four pounds of sugar, half a pint of elder-flowers, *not* pressed down, and one tablespoonful of yeast. Mix these together, and put them in a cask; stir them every morning for a week and then stop the bung up close; it will be ready to bottle in six weeks. This is a delicious wine.

EMBROCATIONS.—Applications intended to relieve local pains, either by counter-irritation or by the anodyne effects of their ingredients, or by aiding the friction which cannot long be maintained without some such application.

(*a*) Liquor of ammonia, tincture of opium, spirits of turpentine, and olive oil, of each equal parts. Useful for rheumatism or any local pains.

(*b*) Flour of mustard, ½ ounce; vinegar, boiling, 3 ounces. Mix, and rub into the parts to produce counter-irritation.

(*c*) Laudanum, chloroform and soap liniment, in equal proportions, will often relieve local pains.

(*d*) Chloroform alone may be applied, sprinkled on a piece of spongio-piline (to be had at the drug stores), and applied to the parts affected with neuralgia. Care must be taken not to inhale the vapor too long.

(*e*) All embrocations may be applied with good effect by wetting with them the inner surface of spongio-piline, and keeping it to the part. In this way, as the ammonia cannot evaporate, embrocations made with it are much more active.

EMERY.—A variety of corundum, the hardest known substance except diamond. It is bruised and ground to powder in a powerful stamping mill, and is then sifted into various degrees of fineness. It is very useful in the household for scouring and polishing furniture and the like, and for rubbing the rust out of metals. *Emery paper* is made of various degrees of fineness, in the same way as sand-paper, and is more convenient than the powder of emery. *Emery cloth* is much superior to the paper for cleaning utensils of iron and steel. The paper is so brittle that it will not hold together after having been used a little while, and, unfortunately, this happens just when its quality as a polisher is best, from the coarse grains having been rubbed off; by substituting the cheapest kind of calico for paper, an article has been produced, the durability of which more than compensates for the additional cost. The most common use of the emery powder is for cleaning and sharpening needles in sewing; for this purpose, the finest powder is best.

EMETICS.— Medicines used to produce vomiting; but they should be used rarely, except under medical advice. When, however, a person is known to have swallowed any foreign substance, or to have evidently disordered the stomach by improper food recently taken, a simple emetic is quite justifiable, or in case of croup, when no time is to be lost, it may be had recourse to. The only safe drug for this purpose is powdered ipecacuanha and syrup of ipecacuanha, which may be given in doses proportionate to age, and mustard.

(*a*) Powdered ipecacuanha, 15 to 30 grains.

(*b*) Syrup of ipecacuanha, 10 drops to a teaspoonful.

(*c*) A teaspoonful of mustard mixed in a pint of water, and taken in four portions, at intervals of a few minutes.

(*d*) The above doses may be repeated every fifteen minutes till vomiting is produced.

(*e*) Tickling the throat with a feather is sometimes efficacious, especially when, as in poisoning, haste is desirable.

EMOLLIENTS.—Those remedies which relax the tone of the blood vessels of parts. Poultices and warm water fomentations are chiefly those which may be adopted in domestic practice, and they will be found serviceable in many slight cases of inflammation from various causes. Bread or linseed meal poultice is an excellent emollient, as also is the fomentation made with poppyheads, and applied by means of flannel wrung out in it.

EMULSIONS.—An emulsion is an oily substance suspended in some fluid capable of holding in a state of minute subdivision. Thus, castor oil may be rubbed down with yolk of egg, or milk, or mucilage and syrup. A pleasant cough emulsion is made from almonds, gum arabic, sugar, water, and a little tolu, paregoric, and sweet spirits of nitre.

ENDIVE, or Chicory, or Succory.—There are several varieties of this plant, of which the curled are found the most numerous. The green curled is crisp and tender; but the white curled is more so, but less hardy, and usually quite scarce. The broad-leaved Batavian—called by the French *scaroll*—is much cultivated, but used principally by the French and Germans. The leaves only are used in soups, stews, roasts, salads, etc. In season from September to March. For the *Wild Endive*, *see* CHICORY.

Salad (Endive)—In its unbleached state, endive is highly bitter to the taste, and it must be bleached by covering up with an earthen pot, or storing it in a dark cellar, before it is fit for a salad. Prepare and dress same as lettuce.

Stewed Endive.—Wash and drain; put it in boiling water for about one minute, and drain it again. Put it into a stew-pan with a little broth, and simmer till tender; then add a little gravy, season to taste with salt and pepper and serve. The wild chicory may be prepared in the same way.

ENTREES.—A technical term in French cookery applied to what are commonly called "made dishes." They are used to supplement the regular dishes of meat, etc., and in a regular dinner are usually brought in with the third or fourth course, or between them. They are also valuable as a means of enabling cooked food to reappear in a novel and economical form; they will often serve as the *basis* of a quiet dinner, and above all for invalids, sedentary people, and convalescents, for whom something light and tasty is desirable, which will excite them to eat a little without making them feel afterwards as if they had overtasked their digestive powers. We shall not give here a long list of *entrées*, because they will be found throughout the work under the ingredients of which they are chiefly composed. A few, however, will be brought together, if only to show what we mean and what may be done in this line—for every one seems to like "made dishes," properly prepared.

Beef Cakes.—*For a side dish.* — Pound some beef that is underdone with fat bacon or ham; season with salt, pepper, and a little onion or garlic: mix them well, and make into small cakes three inches long, and half as wide and thick; fry them a light brown, and serve them in a good thick gravy.

Beef Olives.—Cut slices of beef (either raw or cooked), an inch thick and four inches square; lay them on a forcemeat of bread-crumbs, a little suet or fat, shalot, pepper and salt. Roll them, and fasten with a small skewer; put them into a stew pan with some gravy made of the beef bones, or the gravy of the meat and a spoonful or two of water, and stew them till tender.

Bubble and Squeak.—Boil and drain: then chop and fry, some cabbage, with a little butter or drippings, pepper and salt; lay on it slices of underdone beef, lightly fried, and seasoned with pepper and salt.

Bird's Nest.—Eggs boiled hard, the shells removed, and each surrounded with forcemeat; after which they are fried or baked brown, and cut in half and laid in the dish with gravy.

Calf's Head, Hashed.—Boil the head in soft water, or as directed under CALF'S HEAD. Take the meat from the bones, and cut it into thin bits; then take, of the water it was boiled in, enough to stew it till the meat is thoroughly hot. Work half a pound of butter well with half a gill of flour, and mix with it a tablespoonful of the essence of anchovies, three blades of mace, a little nutmeg, and pepper and salt. Add this to the meat, and mix well together. Take the yoke of an egg, well beaten, stir it up with half a pint of cream, and add it to the hash. Stew till the meat is quite tender; then remove, squeeze in the juice of a lemon, and garnish with egg-balls and balls of forcemeat.

Chicken or Rabbit Curry.—1. Cut up a chicken or young rabbit—if chicken, take off the skin. Roll each piece in a mixture of half an ounce of curry-powder and a tablespoonful of flour. Slice two or three onions and fry them in butter to a light brown; then add the meat, and fry all together till the meat begins to brown. Put all into a stew-pan, and pour in just enough boiling water to cover it; simmer gently two or three hours; if too thick, add more water half an hour before serving. If the meat has been dressed before, a little broth will be better than water; but the curry is richer when made of fresh meat.

Boiled rice is usually served with curry. A common practice is to pile the rice round the dish, and put the curry in the middle; the better way is to serve them on separate dishes so that one may be eaten without the other.

2. Take two tablespoonfuls of curry-powder, and mix with it a teacupful of water, half a teacupful of vinegar, and a dessertspoonful of salt. Stew slowly for an hour, and when it becomes too thick, add a little more vinegar and

water. About three-quarters of an hour before dinner put in the fowl, veal, mutton, or fish, cut into square pieces, and previously fried to a pale brown, with six large onions sliced thin. Then stew the whole together till the meat becomes quite tender.

Meat Balls.—Chop up the meat (any kind will do) as fine as for sausages; mix it with a small quantity of bread-crumbs, mace, cloves, pepper and salt, all pounded well; stir them together with one egg, and make into balls about the size of a goose's egg. Roll in a mixture of bread-crumbs and egg, and fry to a light brown; dish them into gravy flavored with walnut catsup.

Pillaw.—Put one measure of well-washed rice to three measures of water, with a pinch of salt, and boil till done. Drain the rice, and spread it on the dish; on this put a layer of mixed vegetables (whatever is in season), made into a ragout, thickened with egg-yolk and seasoned with pepper, salt, and cayenne; cover with another layer of the rice, into which thrust five bits of butter as big as a filbert. Glaze the top with white of eggs; set the dish in a brisk oven for five minutes, and serve.

Pillaw (Turkish, with meat).—Take one measure of well-washed rice and three measures of good broth; set them over a brisk fire, in a stew-pan with a close-fitting lid. When it begins to boil, steep two or three threads of saffron in a teacupful of warm broth; when well-infused, pour it into the stew-pan and let all boil, closely covered. When the rice is cooked, spread it on a dish; on this put a layer of ragout and any meat, fowl, or game; cover with another layer of the rice, and pour over the whole a tablespoonful of melted butter.

Salmagundy.—This is a very pretty dish, if in nice shape, and if the colors of the ingredients are varied. For this purpose chop separately the white parts of cold chicken or veal, eggs boiled hard and whites and yolks chopped separately, parsley, half a dozen anchovies, beet-root, red pickled cabbage, ham and grated tongue, or anything well flavored and of a good color. Some people like a small proportion of onion, but it had better be left out. A saucer, large teacup, or any other base must be put into a small dish; then make rows around it wide at the bottom, and growing smaller towards the top, choosing such of the ingredients for each row as will most vary the colors. At the top a little sprig of curled parsley may be stuck in. Or, without anything in the dish, the salmagundy may be laid in rows, or put into the half-whites of eggs, which may be made to stand upright by cutting off a bit at the round end. In the latter case, each half egg should have but one ingredient. Garnish between with curled parsley. Pour a salad dressing over all.

Sausage Side Dish.—Potatoes nicely mashed, and shaped in a basin or deep pie-dish, turned out and covered with sausages, all the ties crossing at the top. Help a sausage and a spoonful of potatoes to each plate.

Sweetbreads.—Several excellent *entrees* are made of sweetbreads. For them, *see* SWEETBREAD.

Veal Balls.—Take two ounces of beef suet; two ounces of veal, minced fine; the yolks of one raw and one boiled egg; one small onion; salt, pepper, mace, nutmeg, and lemon-peel to taste. Beat them all well together; make into balls; fry to a light brown, and serve in gravy.

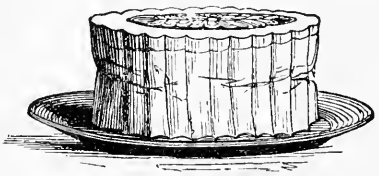
Veal Cake.—I. Take the best end of a breast of veal, bone it and cut it into small pieces; boil two or three eggs hard, divide the yolks, and cut the whites into pieces; take two anchovies; some parsley chopped fine, ham, rather lean, cut into thin slices, season these well with cayenne, black pepper, salt, and nutmeg; put in a layer of veal, parsley, ham, etc., till the deep dish is full; pour a cup of water over it and the bones at the top; cover it close down, and bake it in a slow oven for four hours; take the bones off when it comes out, and turn it out when cold.

II. Take the thick part of a leg of veal, free from skin and sinews, and some good fresh suet or marrow, with a little bit of clear fat bacon. Beat it in a marble mortar till it comes to a paste. Season with white pepper, cayenne, salt, nutmeg, and mace, and, if it is liked, with a little lemon peel. Make it up in cakes about the size of a biscuit; fry them in clear dripping till they become of a nice light brown. Serve them up with white sauce, which must not be put over them. This makes a pretty corner dish, or will serve for first or second course for a small dinner-party.

Veal Olives.—Take eight or ten cutlets; dip them in yolks of egg beaten up; season with pepper and salt, and lay over them a little forcemeat; roll them up and tie them with a thread (which is to be removed before serving), and fry them in lard or fat; then put them in a stew-pan with some good gravy, an anchovy, pepper, and mace; make some balls of flour or Indian meal, boil them a little, and put them in; thicken with flour and butter.

Vol-au-Vent.—As a *vol-au-vent* may be made of anything, and must contain a variety of ingredients, it is an economical way of using up in an acceptable way many little remnants which would otherwise be wasted. The housekeeper, on looking over the contents of her larder, can often out of them compose an original *vol-au-vent*. Bits of cold fowl, pigeon, meat, game, livers of ducks, chickens or geese, kidneys, portions of sausage, stuffing, and forcemeat; unused oyster, caper, shrimp, or anchovy sauce, etc., etc., will, with judicious additions, costing little, constitute a dish pleasing to the eye as well as to the palate. After selecting the ingredients, mix well together; season to taste with salt, pepper, and spices; put into a stew-pan with a little gravy or broth, and stew until done. Meat *vols-au-vent* may have their character varied by flavoring with Worcestershire or other sauce, truffles, lemon peel, or even a dish of curry-powder. When done it is ready to go into the crust.

Making the crust of the *vol-au vent* is one of the things which require to be *seen* done. It is thus performed:—Roll out the lightest possible puff-paste to three-quarters, or one inch in thickess. Lay it on an iron oven-plate. A sauce-pan lid will serve to cut out the required circle. Trim away the rest of the paste, which will serve for patties or garnishing. Trace, with a knife heated in hot water (to prevent the paste from sticking to it), a smaller inner circle within it, to form the lid of the vol-au-vent, leaving an edge about an inch broad, and making your knife penetrate to nearly half the thickness of the paste. The surface of the whole may be glazed with egg, or otherwise



A Vol-au-vent.

decorated. Put into a brisk oven; when, if the puff-paste has been well-made, the whole ought to rise to the height of three or four inches. When well risen, and of a nice light brown, take out, lift the cover immediately, and with your knife remove the underdone paste or crumb within, leaving the hollow which is to receive your stew, and taking care not to make any leaks in it. But to accomplish this well is one of the nicest operations in pastry-cooking. An ornamental *vol-au-vent* may be made in a mould, as shown in above cut. See CROQUETTES, LAMB CHOPS, SWEET BREADS and VOLS AU VENT.

ENTREMETS.—A French term applied to all dishes of vegetables; all salads of greens; all omelettes, except those of ham, bacon, salt pork, and kidneys; macaroni, rice, eggs, etc. Also to all sweet dishes, such as cakes, pies, compôtes, puddings, and cheese.

EPILEPSY.—A disease, the exact cause of which is not known, but of which the main features are sudden loss of consciousness, and convulsions, lasting a longer or shorter period. The attack begins with a sudden pallor of countenance, and a fixed expression of face. Sometimes there is simply a shriek and the patient falls to the ground violently convulsed. There is usually foaming at the mouth; the tongue is thrust forward, and sometimes badly lacerated by the teeth. The eyes are generally fixed, but sometimes roll continuously and are quite insensible. The face becomes purple, and breathing is frequently suspended for a time. The bowels and bladder may discharge their contents. The convulsions may affect any or all parts of the body; usually one side is worst. Gradually they pass off, and the patient remains quiet and apparently insensible; this may pass into sound sleep, from which he may recover, knowing nothing of what has occurred, except by the pain from straining his muscles and from the lacerated tongue. Generally, too, there is headache. The fit may last from a few minutes to half an hour, and may recur as often as twice in one day, though ordinarily not for very long intervals. The attacks, however, have a tendency to recur and ultimately affect the mental powers. The appearance of confirmed epileptics is very striking: they have a stolid, immobile look, are usually very stupid, and very likely also their moral perceptions are obtuse. Epileptic maniacs are an extremely dangerous set. Often in them a fit of violence will take the place of a true epileptic paroxysm, and they are always dangerous before and after the onset of a paroxysm; it is at these times that the homicidal impulse is strongest. Epilepsy is often hereditary, but it may be induced by a variety of causes. Epileptiform convulsions are not, however, to be confounded with true epilepsy. Such often occur as the result of mental over-work, indigestion, etc., but when the cause is removed they have no tendency to recur as in the case of true epilepsy.

Treatment.—The treatment of epilepsy resolves itself practically into what is best to be done in the intervals between the fits. During the paroxysm, great care should be taken that the patient does not hurt himself, but otherwise he should be let alone. The great remedy for epilepsy at present is bromide of potassium in full doses. To begin, the patient ought to have at least 10 or 15 grains three times a day, going up to 30 or 40, or even 60 for a dose, if necessary. This does good in a great majority of cases, but in some it does not. In these, strychnine or nux-vomica is sometimes given with advantage, but must be used cautiously, and ought never to be given at all without a physician's prescription. At the same time every effort must be made to improve the general health.

EPSOM SALTS.—This is a simple but most useful remedy. In ordinary doses, the Epsom salts act as a saline purgative, giving rise to a speedy and free watery evacuation of the bowels. Two drachms or half an ounce in a teacupful of water is the dose commonly required; but as constipation sometimes follows its use in this way, it is perhaps better to take smaller doses, daily repeated for a time. The addition of a few drops of dilute sulphuric acid renders the salt more palatable. In this way it is best given in the mornings, and is an exceedingly valuable remedy for those whose livers are habitually what is called torpid—that is, where there is a tendency to biliousness, with irregular bowels and high-colored urine, such as occurs in men who live too highly.

ERMINE.—The fur of the ermine, an animal of the weasel family; native of all the northern parts of the world. It is a delicate white in color, and is one of the most expensive of furs. The pale cream-colored are considered choicest, but those of a de-

cided yellowish tinge are the least desirable.

To Clean.—Dust the furs well with a soft flannel; then rub into them with the flannel fine wheat flour; shake out the flour, and rub with a clean flannel till all is removed. Rub the fur always against the grain.

ERUPTIONS. (*See* RASH.)

ERYSIPELAS. — This is often classed among the skin diseases, but it is too clearly a constitutional attack of a feverish nature to be omitted from the list of fevers—though one of its essential characteristics is an inflammation of the skin. It is of two kinds: I. Occurring in consequence of injuries, called *traumatic*. II. Independant of any recognizable injury, called *idiopathic*. Erysipelas usually attacks the head and face; but it also occurs in other parts of the body. The local inflammation is preceded and accompanied by fever, and there are generally certain premonitory symptoms that precede the outbreak of the disease; the patient feels sick—shivery, feeble, languid, and drowsy. After these symptoms have continued for some time, a red spot appears on some part of the body, accompanied with burning heat and tingling. The skin is red, and this redness spreads rapidly; it is accompanied with swelling, variable in amount, but often very considerable. When it attacks the face, the appearance of the face is completely altered by the swelling; all the features are confused, the eyes are concealed, the expression distorted; the sufferer would not be recognized by his nearest friends. With all this there is a high fever, with quick full pulse, thirst, vomiting, violent shivering, constipation, and, at a later stage, sinking and exhaustion. Many mistakes are made relative to this disease even by professional men, who confound it with chronic eruptions of a different character, though presenting a somewhat similar appearance. True erysipelas, as we have said, is always attended with more or less fever; and its attack is sudden, running a comparatively rapid course, and requiring immediate attention. The peculiarity of the eruption is that it has always a defined and raised edge,—so that by the touch alone a practised hand can distinguish a case of erysipelas in a moment. There is a great tendency to spread, and sometimes the course is very rapid from one part to the other. Erysipelas of the scalp is attended with risk to the brain, and should always be treated with promptness by the best attainable medical skill. In most cases, vescicles of a considerable size make their appearance, and as the inflammation subsides the cuticle peels off in large thick scales.

Treatment.—There are various modes of treating erysipelas, but the disease is of such an urgent nature that no one ought, after a knowledge of its presence, to delay a moment in calling in medical aid. In general moderate purgatives, diaphoretics, and strict confinement to bed, are to be adopted. The muriated tincture of iron, given 20 drops in a wineglass of sweetened water every 3 to 4 hours, is regarded as a specific by many physicians. In order to allay the local irritation, it is recommended to wash the part from time to time in warm milk and water. One of the topical applications which has been recommended is an acidulated solution of nitrate of silver. The solution is made with one drachm of nitrate of silver, ten drops of nitric acid, and an ounce of distilled water. This is pencilled over the inflamed parts, extending to a little beyond them, and left to dry; it blackens the skin at the time, but the cuticle peels off in a few days, and leaves the surface healthy. Collodion is likewise a good local remedy. Erysipelas is contagious, and its spread must be provided against by ventilation and scrupulous cleanliness.

ESCHALOT. (*See* SHALLOT).

ESSENCES.—Essences and essential oils have now become one of the essentials of good cookery, and enter into a large proportion of cooking receipts. Most of them may be had at the druggists and grocers, but they are much better made at home, and require little trouble in the preparation. Some of them, however, require a still; and if such a thing is not at hand, it is necessary to buy them. We give a list of those that can easily be made. They must all be bottled and kept tightly corked.

Allspice (Essence of).—Oil of allspice, twenty drops; proof spirit, one ounce. Mix.

Almonds (Essence of Bitter).—Essential oil of bitter almonds, one drachm; proof spirit, seven drachms. Mix. *This must be used with great caution as it is poisonous in doses above ten or twelve drops.*

Caraway (Essence of).—Oil of caraway, one drachm; proof spirit, four drachms. Mix.

Celery (Tincture of).—Celery seed, bruised, half an ounce; spirits of wine, two ounces. Put it into a bottle, cork it, and stand it near the fire for three or four days. A few drops will flavor a bowl of broth, and greatly improve soups, etc. The seeds ought to be kept for boiling in soups if the tincture is not approved of.

Cinnamon (Essence of).—Oil of cinnamon, twenty drops; proof spirit, one ounce. Mix.

Citron (Essence of).—Oil of citron, thirty drops; proof spirit, one ounce. Mix. This is an excellent addition to punch.

Cloves (Essence of).—Oil of cloves, twenty drops; proof spirit, one ounce. Mix.

Or, infuse a quarter of an ounce of the cloves themselves in two ounces of proof spirits for a fortnight; then strain.

Cochineal (Tincture of).—Cochineal, ten grains; proof spirit, one ounce. Mix in a glass bottle, and steep. The cochineal, unless powdered, takes a long time to dissolve, and the bottle must be frequently shaken.

Ginger (Essence of).—Bruised ginger, one ounce; proof spirit, one pint. Digest, and strain.

Mace (Essence of).—Oil of mace, twenty drops; proof spirit, one ounce. Mix. Useful for flavoring sweets and white sauces, etc.

Or, proceed as for essence of cloves.

Marjoram (Essence of).—Oil of marjoram, twenty drops; proof spirit, one ounce. Mix. Useful for flavoring gravy.

Nutmeg (Essence of).—Oil of nutmeg, twenty drops; proof spirit, one ounce. Mix.

Orange or Lemon Peel (Essence of).—Rub the yellow side of the peel of fresh lemons or oranges with lumps of white sugar, and when saturated, press into a wide-mouthed bottle and cork. This is much superior in flavor to the dried peel.

Orange or Lemon Peel (Tincture of).—Orange or lemon peel, sliced thin, four ounces; proof spirit, four ounces; water, six ounces. Soak for 48 hours, and strain.

Savory Spices (Essence of).—Black pepper, one ounce; powdered allspice, half an ounce; grated nutmeg, quarter of an ounce; proof spirit, one pint. Mix and steep ten days, then decant.

Sweet Marjoram (Essence of).—Tops of sweet marjoram, one pound; proof spirit, one gallon; water, half a gallon. Steep a couple of days, and then boil off one gallon. Useful to flavor stews and sauces.

ETHER.—Sulphuric ether, the form in which ether is generally used, is employed in medical practice as a narcotic, antispasmodic, and stimulant; a teaspoonful in a glass of white wine is recommended by Dr. Brand as a remedy for seasickness. It is a specific in nervous headaches; in burns and scalds it is applied as a refrigerant. Its most important use, however, is as an anæsthetic; and experiment has proved that it is the safest yet discovered. Like chloroform, and for like reasons, either should be used with great caution—rarely except under medical advice.

EVERTON TAFFY. (*See* CANDY.)

EXERCISE.—Bodily exercise is absolutely essential to the maintenance of good health. The human body may be regarded as a complex machine, the various parts of which are so beautifully adapted to each other, that, if one be disturbed, all must suffer. The bones and muscles are the portions of the frame on which motion most depends. There are four hundred muscles in the body, each of which has certain functions to perform that cannot be disturbed without danger to the whole, and it is a wise provision of nature that the more these muscles are exercised the stronger do they become; hence it is that laborers are stronger and more muscular than persons whose lives are passed in easy or sedentary occupations. Besides strengthening the limbs, muscular exercise has a most beneficial influence on respiration and the circulation of the blood. Says a distinguished medical writer:—"Exercise tells by inciting both heart and lungs to increased action and energy, and this, done in a pure air, is great gain to the purification of the blood; but exercise does much more, for not only are the lungs, with their large capacity for air, great purifiers, but the skin is little less effective towards the same end. All know the palpable effect of exercise upon the skin; but many are not aware that the sensible perspiration is but an increase of an insensible perspiration which is unceasingly poured out from myriads of little pores—the mouths of the sweat glands and the oil glands of the skin. The ordinary insensible perspiration is continually freeing us from a mass of impurity which cannot be retained in our system without injury. Convert the insensible perspiration into sensible, by exercise, and produce moderate sweating, and if the clothing be rational, you will give off to the winds the cause of many a headache and gloomy thoughts. Now this increased skin secretion must come from somewhere; and so it does, for the increased exertion causes increased wear and tear of system; every step works up tissue; and muscles, blood-vessels, nerves, are all used quicker than when there is no action. Off go these used-up matters, probably the worst first, through lungs and skin, as fast as they can, and the man begins to feel this waste, for from all sides there are telegraphs to the stomach for supplies, and he finds himself getting excessively hungry, the dinner hour very welcome, and the formerly capricious stomach ready for anything; and so new supplies go in to supply the place of the old used-up works, and the physical man is greatly renovated—taken to pieces, as it were, and built up again." By proper exercise is meant the use of all the muscles in the body, not to any immoderate degree, but sufficiently to keep them in good condition, and to render the discharge of their several functions easy and pleasant. Hardly any kind of exercise can be considered as by itself doing this, though to read the advertisements of the various "lifting machines," a credulous person might think one had been discovered. The lifting machines are good things, though, after the user has recovered from the strain that ambition always leads him to give himself at first. For persons of ordinary strength, the most convenient one yet invented (summer of 1876), is probably Johnson's. For neatness and compactness it is unrivalled. The writer uses it. Walking, which is, on the whole, the best exercise, if one has the time, employs the legs much more than the arms. Rowing, again, exercises the chest and arms more than other parts: taken in moderation and combined with walking, there is no better exercise than rowing. Horse-back riding is very good, and in some particular cases remarkably useful, and probably calls into play more muscles than any other exercise outside of the gymnasium, or than most single ones in it; it should be combined, however, with others. The college students have lately discovered that "passing the ball" (*i. e.* throwing from one to another and catching it), is a sovereign exercise. A better can hardly be imagined; it uses all the limbs in almost all conceivable positions. For those predisposed to any diseases of the chest, reading aloud and singing are among the best exercises that can be taken; they call into play many

muscles, and cause a more rapid transmission of blood through the lungs. All exercises, however, must be regulated by certain rules, the principal of which is to avoid carrying it to excess—to proportion it always to the state and the previous habit of the individual. Active exercise should be avoided immediately after a meal, as by diverting blood away from the digestive organs into the muscles, it tends to suspend digestion. In the next place, it is a mistake to consider the labor of the day as equivalent to exercise. Work, generally speaking, is a mere routine process, carried on, with but little variety of circumstances, in a confined atmosphere. To derive the greatest amount of good from exercise it must be out of doors, must be combined with amusement, and be made generally pleasurable and recreative. As a rule, every one should take at least two hours exercise *out of doors* every day; but this should be so arranged as neither to excite the mind beyond the point of pleasureable interest, nor to degenerate into mere routine.

EXPECTORANTS.—Medicines which excite and promote a discharge of mucus from the lining membrane of the bronchial tubes, given with the idea of thereby relieving inflammation or irritation. They act in two ways: first, by removing the constriction of those vessels, on which the principle of nausea seems to act; and secondly, by stimulating the vessels. By this latter method the natural secretions, when deficient, are restored; or when they are in an unhealthy state they are changed to a natural condition.

(*a*) Ipecacuanha wine, 3 drachms; syrup of tolu, 5 drachms; mucilage of acacia, 1 ounce; water, 6 ounces. Mix, and give two tablespoonfuls every four hours.

(*b*) Pill of squill and compound ipecacuanha powder, 1 drachm of each. Mix and divide into 24 pills, one to be taken every four or six hours.

(*c*) ℞ Tinct. Serpentariæ.
Syr. Scillæ, of each 1 drachm.
Syr. Ipecac—2 drachms.
Syr. Tolu.
Tinct. Opii Camp. of each 6 drachms.
Chloroform, 10 drops.
Shake—Teaspoonful every 3 or 4 hours for cough.

(*d*) Powdered ipecacuanha, 1 grain, and powdered opium, half a grain, made into a pill and given at night is sometimes useful for quieting those troublesome coughs which come on at that time; but it must only be given to those who are known to be able to take opium.

EXTRACT.—This term refers more properly to the mode of preparation than to the nature of the substance prepared. Making an extract consists in dissolving by water, spirit, or any other menstruum, such parts of vegetables as are soluble, and concentrating this solution by heat to a thick consistence, or to entire solidity. If water alone is employed, the solution is called a *watery* extract; if alcohol, or proof spirit, then the product is a *spirituous* extract. To make a watery extract, boil the substance in water, strain the decoction thus secured, and boil it down till it has acquired the proper consistency. In performing this operation, a higher temperature than that of boiling water must not be employed, and yet the evaporation must be effected as quickly as possible by having the evaporating vessel broad and shallow, and set in a water-bath. To make a spirituous extract, a tincture of the substance must first be made, and this evaporated gently in a water or sand-bath; or a distilling apparatus may be employed, and thus the spirit be saved. Some extracts require long digestion. (*See* ESSENCES.)

EYE.—Most of the ordinary ailments of the eye are preceded by careless use or by some disorder of the body, and the best safeguard against the local affection is care of the general health. Washing sound eyes carefully in cold water, and opening them in the water, is an excellent way to strengthen and protect them against disease. When, however, the lids are painful from over-work, warm water is often more efficacious. The sources of trouble are so multifarious that experiment alone can indicate the fit temperature to use. In reading, never face the light. Let it fall on the book over the shoulder, the left if practicable. The main object is to prevent the light recoiling from the book to the eye. Imagine a ball thrown from the light or window on to the book: positions that the ball would strike in rebounding, are those that the eye should not occupy. If the eyes begin to pain while reading, stop at once. All oculists are now agreed in recommending the use of glasses as soon as the want of them is discovered. Old people must not neglect too long the limits of time, but resign themselves, as soon as age indicates, to the aids it requires. Short-sightedness and long-sightedness are organic conditions, and cannot be removed by artificial means. The advice of an oculist is of great service, when it can be obtained, in selecting glasses.

Injuries to the Eye.—Foreign bodies frequently get fixed in the eye, generally under the upper lid. In such cases M. Renard, the eminent French oculist, recommends the following simple process:—"Take hold of the upper eyelid near its angles with the index finger and thumb of each hand, draw it gently forward, and as low down as possible, over the lower eyelid, and retain it in this position for about a minute, taking care to prevent the tears flowing out. When at the end of this time, you allow the eyelid to resume its place, a flood of tears washes out the foreign body, which will be found adhering to, or near the lower eyelid." When this does not succeed after one or two trials, shut the eye, pass a bodkin under the lid, press gently upon it with the finger, and pushing outwards against the lid with the bodkin, sweep the little nuisance into the inner corner of the eye. Or pull the lid away from the eye, put a little slip of letter paper under the lid, press gently upon it and draw it away. Occasionally one of these particles penetrates the eyeball and sticks too fast to be re-

moved by any of the foregoing methods. In such cases an oculist's or surgeon's advice must be sought *at once*, as every hour of delay is one of increasing danger. A single fold of cotton or linen, wet with cold water and laid over the eye, is all that is needed till surgical help can be obtained. If the *eyeball* has been *cut* or *broken*, or anything thrust or blown into it, a solution of four grains of sulphate of *atropia* in an ounce of distilled or pure water may be dropped into the eye three or four times a day; or belladonna ointment may be rubbed on over the brow. Both of these dilate the pupil, and atropia is the oculist's sheet anchor. Never put on leeches near the eye, but on the temple, just in front of the hair. Never poultice the eye, or put on warm applications of any kind without a surgeon's advice. Never put an "eye-stone" into the eye to remove a foreign substance.

Burns from lime, in the form of mortar or plaster, are very dangerous; for, although they may not destroy the eyeball, they render the cornea opaque where they come in contact with it, and hence produce partial or total blindness. Moreover, they burn the inner side of the lids, and thereby cause these to adhere to the eyeball by fleshy growths, which it is almost impossible afterwards to separate so as to allow the globe to move with the necessary freedom. Olive-oil dropped into the eye after it has been washed out with a weak solution of vinegar and water, may be used while surgical advice is being obtained. When any of the strong acids, such as sulphuric or nitric, have come in contact with the eye, they act chemically on the tissues, and hence their danger. Immediately after such an accident, syringe the eye with solution of five grains of bicarbonate of potash to two tablespoonfuls of water, and drop sweet oil between the lids. When some strong alkali, like caustic potash or soda, has gotten into the eye, wash it out at once with a tablespoonful of vinegar in two tablespoonfuls of water.

Scalds from hot water, and burns from liquid metals or the like, can be treated like the same injuries in other parts of the body. (*See* BURNS.) Drop sweet oil on and in the eye, and lay rags wet with it on the outside of the lids. Surgical advice should be sought at once—especially for those on the outside of the lids; these are peculiarly dangerous, because the contractions of the skin, after healing, may distort the natural and necessary curve of the eyelids, which adapts them to the eyeball. The edges of the eyelids are frequently a source of trouble, from being irritated by cold or other causes. The exudation which gathers and thickens upon them should be gently softened with warm water, and its accumulations prevented by a slight application of sweet oil or mutton suet before going to bed. (For inflamed eyes, *see* OPHTHALMIA.)

F

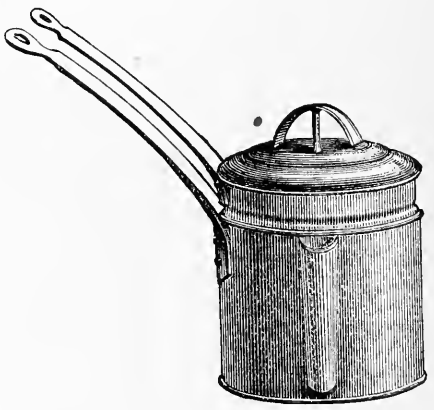
FACE-ACHE.—Camphor and brandy, made strong by dissolving as much of the former as will fill a small thimble, in half a teacupful of the best brandy is a good remedy, and may be employed for the faceache, when it arises from cold in the jaw. Dip cotton cloth or paper in this mixture and place it on the cheek or gum. An ounce of laudanum added to five ounces of opodeldoc may be used in the same way. Warm applications of any kind are also good. (*See* NEURALGIA, and TOOTHACHE.)

FAINTING-FIT.—A fainting person should always be placed in a recumbent posture, with the head a little lower than the body. Every article of dress should then be loosened, and as soon as possible, a little cold water dashed with sudden violence into the face. Volatiles may be held to the nose (care being taken not to pour them into the nostrils) with good effect; and as soon as the patient can swallow, recovery will be expedited by a glass of wine, or a few drops of ether or sal-volatile in water. Free admission of fresh air is very important in a case of fainting, and for this reason bystanders should forbear crowding around.

FARCED MEAT. (*See* FORCED MEAT.)

FARE, BILLS OF. (*See* BILLS OF FARE.)

FARINA.—A name applied to the fine flour obtained by grinding and sifting any kind of grain; also to the starch obtained from roots and grain. Cornstarch is frequently called farina; and several very simple preparations of farinaceous food are distinguished by this name, coupled with some high-sounding epithet. (*See* PUDDING.) The boiler shown in the cut



Farina Boiler.

is much better than the common form for cooking farina, cornstarch, and similar substances. It is in two parts; the farina being put in the upper one and water in the lower. All danger of scorching is thus avoided.

FAT.—Fat is an animal oil of various de-

grees of consistency, according to the kind of animal or the particular part of the body in which it is situated. While it remains in the living body it is always in a fluid state, or semi-fluid; but its consistence changes when it is extracted and exposed to the common temperature of the atmosphere. To obtain animal fat in a pure state, it must be melted and strained from the investing membranes—a little water must be added while it is melting to prevent its being scorched. When thoroughly purified, it is white, tasteless, and inodorous; but it soon becomes rancid on exposure to air, on account of the absorption of oxygen and the consequent formation of a number of fatty acids. By washing the fat in fresh water, these acids may frequently be extracted and the sweetness of the fat restored. It is best, however, to keep it cool and tightly closed.

Fat in any excess is difficult of digestion, particularly by weak stomachs, and therefore is not proper for dyspeptics; and it is rendered still less digestible when subjected to high temperature in certain culinary processes, as frying. All meats and fish that contain much oil or fat are apt to lie heavy on the stomach, if they do not cause greater trouble; but while caution is to be exercised, it must not be forgotten that fat is one of the most essential elements of food. Dr. Dobell says in his Manual of Diet and Regimen: "Fat is so essential to the maintenance of healthy nutrition, that the quantity contained in the daily food cannot be reduced without the greatest risk. The importance of fat in nutrition should be studiously borne in mind by those who construct diets for the poor, for public institutions, or for the treatment of obesity, diabetes, dyspepsia, and the like." Dr. Lankester says: "A healthy man, weighing 154 pounds, contains in his body twelve pounds of fat. This constitutes more than a thirteenth part, by weight, of his body. When this proportion is not maintained, the body gets thin; and this is characteristic of some of the most dangerous diseases to which the human body is subject. The loss of fat is especially seen in that commonly fatal disease, consumption; and one of the most effectual methods of treating this fatal disease is the administration of fatty articles of food." Dr. Smith says in his book on "Foods": "The value of fat in the animal economy is exceedingly great, both chemically and physically. Chemically, it supplies the heat-forming elements of food in their most compendious form, and is much more rapidly transformed than starch under the influence of exertion . . . . Physically its action may be less important, but it is most desirable as an addition to bread and farinaceous food generally. It supplies an agreeable flavor, without which they could not be readily eaten, and lubricates the passage through which the masticated food is the more readily conveyed. It is also very probable that it exerts an influence, so that with some excess of fat, the bowels will act more readily than when the diet is deficient in that lubricating substance." We emphasize the matter thus because it is of the first importance, and because it is constantly overlooked or ignored in American dietaries.

FEATHERS. — Feathers for bedding are obtained: 1st, from the common poultry and game which come to table, and called *chicken feathers;* 2d, from the *grey goose*, and called by that name; 3d, from the domestic *white goose;* and, 4th, from the foreign white goose, and called *Dantzic.* The chicken feathers are generally bad in quality, being mixed with ducks' feathers, which are hard. The Dantzic are the best feathers, next to down, but expensive. Perhaps the best for ordinary use are *white goose feathers*, carefully picked. Collect them as soon as possible after the death of the bird, unless you pluck geese alive, as some cruelly do several times a year. It is said that feathers thus obtained are more elastic than when drawn from a bird some time dead. The large ones being removed, the rest are placed in a large pan, put into the stove, or before the fire, and heated for several hours, during which they should be constantly stirred up and shaken. The heat destroys the eggs of insects, and drives off the oily matter: it also hardens and stiffens the fibres, thus rendering them much more elastic.

Cleaning. — I. (*For bedding.*) — Mix well with a gallon of water, one pound of quick-lime; and when the lime is precipitated in fine powder, pour off the clear lime-water for use at the time it is wanted. Put the feathers to be cleaned in a tub, and add enough of the lime-water to cover them about three inches. The feathers, when thoroughly wet, will sink down, and should remain in the lime-water three or four days; after which spread them on a sieve and let them drain. Then wash them well in clean water, and thoroughly dry them on nets in the sun.

II. (*Ornamental feathers.*)—Work a short time in a lukewarm bath containing Castile soap, with enough aniline violet or blue, to give them a bluish shade of white. Too much of the dye-stuff must carefully be avoided. Then press them between cloths, and while yet moist expose them to the fumes of burning sulphur and rinse, when they will come out white. While drying, frequent clapping them between the hands will give that fluffiness desired in some kinds, as ostrich feathers.

Curling.—They should be well dried, a warm dull knife should be used, which is drawn slowly from the base to the tip of each fibre, the thumb or finger pressing the feather against the knife. In all these operations great care should be exercised to avoid breaking the feathers, especially if they have been curled before, when they are apt to be quite tender.

Dyeing.—Before dyeing, feathers require to be cleaned, and to have the oil which naturally adheres to them removed. If the oil only is to be removed, soaking for 1 to 12 hours in a cold bath containing 1 to 4 oz of calcined soda, with a pinch of carbonate of ammonia in ten

gallons of water suffices. They must then be rinsed in clean water. If not yet clean, treat as directed under *Cleaning*.

After dyeing, the natural oiliness and brilliancy must be restored by treatment with a bath containing ½ lb olive oil and 6 oz potash, well stirred into about 1½ gallons of warm water, and then drying in a warm room, or, while yet moist, terra alba (sulphate of lime) may be dusted over them, which is brushed off when they are dry. The latter method is not so good as the oil bath.

As regards their affinity for colors, feathers are about the same as silk fibre, though since prolonged treatment in solutions is detrimental to them, the dye baths are usually made stronger than for silk goods, and the feathers are immersed for a shorter time. The COAL TAR COLORS soluble in water, which dye silk without a mordant, may be used for feathers. (*See* DYES.) The following special hints may also be valuable:—

Black is obtained by soaking them several hours in a solution of one pint of nitrate of iron (to be had at the druggists), with enough water to make a gallon of the mixture, and then working them in a decoction of equal parts of logwood chips and ground quercitron bark, until they take the proper depth of tint.

Bronze tint for the quills.—This is effected by use of the aniline blue, not soluble in water, but soluble in alcohol. A concentrated solution of the color is made in alcohol (all that the alcohol will take up), and this is then applied with a camel's hair brush to the quills.

Brown may be obtained by dipping them for 1 to 2 hours in a decoction of 2 lbs catechu in a gallon of water, to 1½ lb of feathers, and then in a bath containing ½ lb of bichromate of potash in a gallon of water at 130° Fahrenheit.

FEET.—The chief care is to avoid tight or high heeled shoes. In paring the nails, elderly persons are apt to wound the flesh, which is sometimes dangerous, the circulation in the extremities being so feeble that mortification sometimes ensues. Excessive perspiration of the feet may be remedied by washing them daily in cold water, and sprinkling in the stockings a powder of starch or arrowroot, perfumed with bitter almonds, orris, or some other slightly odorous substance. Sedentary persons often suffer with cold feet, owing to deficient circulation, and can only be cured by exercise and attention to the general health; but it may frequently be relieved by simply bathing and putting on fresh socks every day, rubbing the feet with alcohol, and sprinkling a little red pepper in the shoes. *Never go to bed with cold feet.* Apply heat in some way. (*See* HOT WATER-BAG.)

FELON. (*See* BONE-FELON.)

FENNEL.—This plant is easy to cultivate. Sow early in the spring, in shallow drills, from six to ten inches apart, and if intended to remain, when the plants are three or four inches high, they must be thinned to about fifteen inches apart.

The tender stalks of fennel are used as a salad; the leaves, when boiled, enter into many fish sauces, particularly for mackerel; and when raw make excellent garnishes. It is also eaten raw with pickled fish. The whole of the plant is good in broth or soups; it is a hardy and wholesome herb, and agrees well with the stomach. The seeds, or "*half fruits*," infused in boiling water, make an excellent carminative, which, having no actively exciting qualities, is frequently employed to disguise by its pleasant aromatic flavor the taste of disagreeable medicines, such as senna and rhubarb.

FEVER.—The different febrile diseases are treated of in their appropriate places; but we shall offer here a few observations which do not apply especially to any, but will be helpful in the treatment of all—particularly in that portion of the treatment which devolves upon the family or the nurse. The substance of these observations is taken from a little work on household medicine, by George H. Hope, M.D., an English physician of eminence.

When nursing a case of fever, never forget ventilation. Change the atmosphere of the room frequently; blow the bad air out of it, and let the fresh air in, not only that the patient may have the best possible chance of recovery, but for your own sake and for the sake of others. In every sick-room, but especially in a case of fever, the chimney should be open, fire should be kept up, even if the weather be quite mild, or if the house have a furnace in it; this is not so much for heating as for ventilating the room in the best way. It is good that the patient's hair should be cut short, as it enables him to be attended to better, and also tends to keep the head cool and comfortable. When a person is delirious with fever, the dreams and fancies are almost always of a painful nature, the countenance showing plainly that the mind is troubled. There is a sense of fear, a dread of something which he may not have the power to explain to you. Try in every way to gain his confidence; listen patiently to his complaints, however ridiculous they may appear to you; do not contradict, or tease him with argument. Remember "dreams to the dreamer are realities," and these things terrify him just as much as if they were actually in the room. It is very common for some part of the furniture to take frightful shapes in the eyes of a fever patient. Perhaps he may be able to tell you what it is, but if not, by carefully watching the eyes, you will find him look steadily at one object, and then turn away suddenly, as if he were trying to escape. When these visions are troubling the patient, the best plan, if you can do so, is to remove him into another room, The effect is wonderful. The visions disappear, the dreadful forms are all gone, and the bright and cheerful face tells you better than words what a relief he feels. If you cannot change the room, change the furniture, and if that cannot be done, alter its position.

A singular and yet not uncommon thing in

fever with delirium is a strong dislike taken by the patient to a particular person, and this generally not a stranger, but a near relative, one who is greatly beloved by him when in health, and who has been for days and nights watching over him. In some cases this feeling of dislike grows into a hatred so deep that it is not safe to allow the person to remain alone in the room. This is very distressing; it appears so ungrateful, such a poor return for all the care and kindness bestowed upon him, so unnatural that it is hard to bear. But it should be remembered that it is unnatural; it is the result of disease, and has no more to do with a patient's real affection than taking a dislike to some particular article of food. As the mind becomes healthy this will pass off; but it is very desirable that the person to whom the dislike is taken should be removed as soon as possible, and not again enter the room till the mind is in a healthier state, or the feeling may become so fixed that it will require a long time to subdue it. During the great thirst of fever you will frequently find that the patient, particularly a child, will prefer pure water to any other drink; but if you require a change, what is called apple-tea is cheap and refreshing. Another pleasant drink is made of the juice of three or four oranges, and one lemon in a quart of water, with a little sugar. When you cannot easily get either oranges or lemons, buy a small bottle of lime-juice; this will keep good in a cool place for a great length of time; it is very wholesome, and a tablespoonful, with half a pint of water, sweetened, will make a glass of good lemonade in a minute. Perfect silence is not always desirable. It is not a good thing to put on list slippers, and walk about without any noise; if you go up to the bedside of a patient in this way, he may get a severe fright. In talking, the same rule holds good; do not whisper, it will very likely awaken the sleeper, just because it is a strange sound; speak in your natural voice, and it will not arouse him, though it be louder than a whisper, for he hears it every day, and is used to it. Therefore let all every-day sounds go on as usual, unless complained of by the patient, and let this reflection comfort you. Sleep in the midst of noise is sounder and more likely to continue than in a dead silence, because slight causes are less likely to disturb it. Is it well to awaken a patient to give food or medicine? Generally if a patient sleeps he is doing well; but in the sinking stage of fever, or other great debility, it may be needful to give something frequently. After days and nights of watchfulness, when the mind is wandering with fever, the patient will fall into a long sleep, which may last many hours. This is the turning-point of the disease, and generally he awakens with the mind restored, and from that time commences, as it were, a new life. When fever is once formed, it runs a regular course, like small-pox. Effort must be made to weaken it as much as possible by fresh air, and to support life by suitable diet, till the disease has worn itself out. But as a person not accustomed to such things cannot know at the beginning whether the illness be fever or not, it is well to act only in such a way as to produce good if it be fever, and no harm if it be not. A person, for instance, after getting wet or being exposed to cold, complains of headache, shivering, and pains in the limbs, back and throat, put him to bed and give him some hot drink, soak his feet in hot mustard water, and at night give him ten grains of Dover's powders (adult dose). Wait to see if he will not throw off the attack, which may be but an ordinary cold; and if he does not, or the symptoms increase, send at once for a doctor. (*See* AGUE, BILIOUS FEVER, BRAIN FEVER, SCARLET FEVER, TYPHOID FEVER, TYPHUS FEVER, and YELLOW FEVER.)

FIG.—The fresh ripe fig has a sweet and peculiarly delicate taste, though those who are not accustomed to them do not always like them. In the Southern States they grow abundantly and are very prolific, producing generally two crops a year; north of Virginia they usually require some artificial assistance to bring them to a ripe and perfect state, and are not often met with. They ripen in July and August. The *dried figs* come from Italy, Spain and Turkey,—the last being most prized. They are considered best when recently arrived here in December and January, after which they should be closely examined. The fig contains a large proportion of sugar, without acidity or oiliness, and is of easier digestion than any of the sweet fruits. It is slightly laxative, and is on this account frequently given to children. (*See* PUDDING.)

Fig Paste.—1. Take one pound of figs, chop them coarsely, and boil with a pint of water until reduced to a soft pulp; strain through a fine sieve, add three pounds of sugar, and evaporate over boiling water until the paste becomes quite stiff. Place the warm paste in a mould, made from an ordinary wooden box, by removing the nails with which the sides are fastened, and holding them in place by a stout string, the sides may be taken away, leaving the paste in a square mass, which may be divided in small pieces with a thin-bladed knife. These pieces should be rolled in fine sugar; after which they may be packed in boxes without adhering to each other.

2. Take a heaping tablespoonful of corn-starch place in a saucepan, and add first enough cold water to moisten the starch uniformly, and next a half pint of boiling water. Heat over boiling water until it is thoroughly cooked and becomes transparent. In fact, the same steps should be taken as are employed by a laundress in preparing a thick starch. Next add a half pound of good brown or half-refined sugar, and the strained pulp of four ounces of figs, prepared as directed in the preceding paragraph, and evaporate the paste over boiling water until it becomes quite thick and adhesive in character. Place in the mould as previously directed and treat in the same manner when cold. In this general way, from the same material as a

base, are prepared the semi-transparent pastes sold under various names, by adding, before evaporation, grated cocoanut, chopped and seeded raisins, dried currants, any desired flavoring or coloring substance, or the pulps of preserved fruits.

Figs (to freshen).—If you happen to have figs which you have kept so long that they seem hardly fit for use, being hard and withered, they can easily be freshened, and made quite fit for the table, in appearance and flavor, in the following simple manner: Take such as are rather dry and uninviting; put them into tepid water, and leave them for a few minutes; then wash well, and dry them in a towel. Heat them carefully in the oven, and on taking them out roll them in powdered sugar, or dip them in the white of egg, and then in sugar, and finally lay them on a sieve to dry.

FILTER. (*See* WATER.)

FINGER-NAILS.—The finger-nails should never be cut too short, as this deforms the finger-ends and renders them stubby. They should always project a trifle beyond the extremity of the finger, and be pared only to a slight curve, without encroaching too much on the angles. To preserve the half-moon, or *lunula*, which borders the lower part of the nail and is esteemed so great a beauty, the skin must be kept from encroaching upon it by pushing it back gently every morning with a blunt ivory instrument. By this means also the annoying "hang nail" will be prevented. Filing or scraping the nails is fatal to their perfection, as it thickens their substance and destroys their natural transparency. The nail-brush should alone be used for cleaning and polishing the nails. The disgusting habit of biting the nails is also destructive of their beauty, as they become excessively brittle in consequence, and always have a "frizzled," uneven appearance.

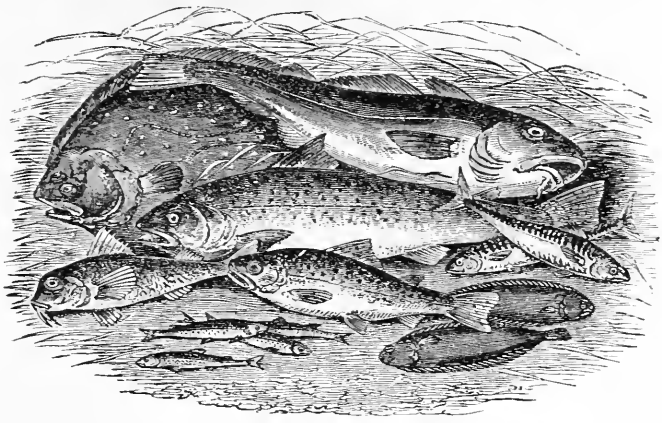
FIRE-PLACE.—A shallow fire-place saves fuel, and gives out more heat than a deeper one. Great advantages may also be obtained by simply lining the back and sides of an ordinary fire-place with fire-bricks. Every one has noticed, probably, that when a fire goes out the coals or wood at the sides are left unburnt while the centre is consumed. With fire-brick, the whole of the fire, however small, will be kept alight; and even after the fire is extinguished, the fire-brick lining will continue to throw out heat for some time A no less advantage is that less smoke is produced.

FIRES.—Stove or furnace. Not only is the driest heat from an open fire more healthy than that thrown off by a stove, but such a fire is also incomparably the easiest and most effective contrivance for securing ventilation. The air of a room in which a brisk open fire is burning is almost certain to be pure; but with any other kind of fire ventilation is at a standstill, and where it is effected at all must be brought about by other and artificial means. (*See* VENTILATION AND WARMING.)

The kindling of a wood fire is a very simple process, but to start one in a grate or stove properly requires some skill. In the first place, the paper should not be put on the bottom of the grate, as is commonly done, for if the wood is in large pieces the iron of the grate absorbs so much of the heat of the rising flame that it will not have strength enough to give the wood sufficient assistance in igniting the coal that is heaped upon it. The better way is to lay some medium sized pieces of coal on the bottom bars, but without covering them entirely; then lay on the paper or shavings, then the wood, and on that some pieces of coal the size of an egg, but no small coal. When the whole is kindled let it burn up well before any more is added. If the small coal is put on first, it is sure to choke the fire by filling up the interstices, and preventing the air from having access to the centre. The coal laid at the bottom will catch fire by the time the wood is burnt out, and will thus keep the fire alight.

FISH.—As a food fish ranks between meat on the one hand and vegetables on the other. It is not so nutritious as the former, though the red-blooded fishes, like salmon, are but little inferior; and it is thought that a diet in which fish predominates produces deficient vitality. "It is not desirable," says Dr. Edward Smith, "that fish should be the sole kind of animal food eaten by any nation; and even if milk and eggs be added thereto, the vigor of such people will not be equal to that of flesh-eating nations. At the same time the value of fish as part of a dietary is indicated by the larger proportion of phosphorus which it contains, and which renders it especially fitted for the use of those who perform much brain-work, or who are the victims of much anxiety and distress." There can be no doubt that fish might with advantage enter much more largely into our family diet than it does at present; it would afford a pleasant variety in fare which is too uniform either for appetite or health, and would also supply certain elements of blood which are not obtained in sufficient quantity from either meat or vegetables. On the score of economy, too, they should receive more attention from the housekeeper. The qualities of the different kinds of fish, and the rules for selecting them, are given under each fish separately; and we will only remark here that the flavor of fish, like that of other animals, is influenced in some degree by the nature of their food, and on this account the same species will vary somewhat in its flavor on different coasts, and in different lakes and rivers. Some fish improve in firmness and flavor as they attain a certain age, as cod and haddock; but generally when they get old they are coarse. The season of the year also has a most decided influence upon the quality of fish. In general, fish are in the best condition just before they spawn, and many while they are full of roe, as smelts, mackerel, shad, and sole; but as soon as the spawning is over they are unfit for food, being sometimes positively unwholesome. This circumstance is of such importance that it has been made a subject of legislative action, regulating the times during

which only certain fish must be caught. When fish are in season, the muscles are firm, and they boil white and curdy: when they are transparent and bluish, though sufficiently boiled, it is a sign that they are not in season or are not fresh.



The mode of cooking fish considerably affects their properties as food. Plain boiling, baking, broiling, and roasting appear to be the favorite methods: but there seems to be no reason why stewing should be objectionable, except that it is usually accompanied by numerous additions which render it extremely indigestible, for instance, port wine. The various sauces commonly eaten with fish are probably the cause of most of the complaints made against this food: these sauces are to be suspected when purchased ready-made, as they often contain deleterious ingredients. Few vegetables are appropriate to be eaten with fish: potatoes and parsnips are the principal of those which are found by experience to agree well.

The following is a list of the various kinds of fish treated of in their appropriate places in this book:

Anchovy,	Gudgeon,	Sea-bass,
Bass.	Haddock,	Shad,
Blackfish,	Halibut,	Shrimp,
Bluefish,	Herring,	Skate,
Bream,	Lamprey,	Smelt,
Bull-trout,	Ling.	Sole,
Carp,	Lobster,	Sprat.
Catfish,	Mackerel,	Stickleback,
Chub,	Mussels,	Sturgeon,
Clams,	Oyster,	Sucker,
Cockles,	Perch,	Tautog,
Cod.	Pike,	Tomcod,
Codling,	Porgie,	Trout,
Conger-eel,	Prawn,	Turbot,
Crab,	Quahaug,	Turtle,
Dace,	Rockbass,	Weakfish,
Dory,	Rockfish,	Whitebait,
Eel,	Salmon,	Whitefish.
Flounder,	Salmon-trout,	Whiting,
Goldfish,	Sardines,	

FITS. (*See* APOPLEXY, CATALEPSY, EPILEPSY, FAINTING-FITS, HYSTERICS, and INFANTS.)

FLANNEL.—A plain woollen stuff, commonly slightly woven. It is excellent for underclothing, or for any clothing in which warmth is desirable, it being a poor conductor of heat, and readily absorbing perspiration, which slowly evaporates from the surface without chilling the body. *Gauze Flannel* is of a very loose, porous texture, not so warm as ordinary flannel, and therefore useful for some purposes. *Domett* is a kind of flannel, the warp of which is made of cotton and the woof of wool; it is very thin, and is useful for linings, etc. *Canton flannel* is a twilled fabric, composed wholly of cotton, a nap being raised on one side of the stuff. A most delicate flannel for the wear of infants consists of silk and wool. Flannel comes generally a yard wide.

A woven merino under-wear is wrongly called flannel. It is not as thorough a protection as flannel. Red flannel, medicated for rheumatic complaints, excels in fame the ordinary red flannel, popularly believed to contain a virtue in its dye.

Opera flannel is the smoothest and finest of the flannels, of medium thickness; with marked diagonal twills it is especially suitable for outside garments. All-wool flannels give more heat than much heavier qualities mixed with cotton. Navy blue flannels are apt to crock unless thoroughly washed before making up. If flannels are not shrunk before making up, allow well for shrinkage. Some flannels, in the dye, obtain a permanent disagreeable odor; look for this, especially in buying plaid flannels. As flannel absorbs moisture readily, so does it retain it; therefore, before using, it should be thoroughly aired.

To Shrink new flannels and make them keep their color, pour boiling water on them and let them lie in it till cold. Then, having shaken them, stretched them, and folded them down smoothly on a clean table to make them straight and even, hang them out immediately. When about half dry, shake, stretch, and turn them. Take them in while still damp, fold smoothly, cover with a clean towel, and after half an hour, iron them with an iron that is nearly cold.

To wash flannel ordinarily, *see* WASHING. To wash flannel that has become yellow, boil

four tablespoonfuls of flour in four quarts of water, stirring it well. Then pour half the boiling liquid over the flannel, let it remain till the water cools, rub the flannel, but use no soap. Rinse it through several waters, then repeat the process with the remainder of the flour and water in a boiling state; again rinse it through several waters, and hang it up to drain and dry. *Do not wring it.*

FLAP-JACKS. (*See* SLAP-JACKS.)

FLATULENCE.—An undue collection of air or gas in the stomach and intestines. It may be swallowed, it may be formed from the food, or it may apparently be generated by the secretions of the stomach and bowels. In most cases, it is due to improper food, or to the abuse of certain articles, as tea. The symptoms are often exceedingly unpleasant. There may be a feeling of faintness, of giddiness, or of choking, accompanied by most troublesome belching. The gases then expelled are most frequently tasteless and odorless, and, if so, are most probably due either to swallowing of air, or to the formation of such simple gases as carbonic acid, or carburetted hydrogen at the expense of the food. Such forms of flatulence, *i. e.*, flatulence accompanied by tasteless belching, are best treated by dieting, mainly solid food with stale bread, a little dry sherry or weak brandy and water, but no vegetables, tea, beer, or pastry. Flatulence may often be only the symptom of dyspepsia, and may generally be relieved by a slight stimulant, as aromatic spirits of ammonia; spirituous liquors should be avoided; *nux vomica*—ten drops in a little water, three times a day, after meals—is also a valuable remedy in such cases. Occasionally the patient belches up gases of the most horrid odor. These gases indicate putrefactive changes in the food, and commonly occur in individuals who have some obstruction preventing the passage of food from the stomach, especially if the obstruction be cancerous in its nature. In such cases the stomach sometimes expands to an enormous size, and vomiting after food is not unfrequent. For such cases, antiseptic remedies almost invariably do good The most important antiseptic remedies are carbolic acid, sulphurous acid, and salycylic acid. Carbolic acid may be given in a dose of one or two drops in a wineglassful of water, half an hour after food; its taste is disagreeable, but it is exceedingly efficacious. Sulphurous acid may be given in the same way, 30 drops of the *diluted* acid in a wineglassful of water; or it may be given as sulphite or bisulphate of soda. Salycylic acid may be given in five grain doses every two or three hours. To the former of these most people would give the preference, as its taste is that of a pure acid; the taste of the others is far more bitter.

Flatulence often gives rise to great pain in the bowels, and the patient urgently demands relief. This can only be obtained by dispersing the wind, as it is called, which is not always an easy task. A good remedy for the purpose is turpentine; but it tends to upset the stomach, and so it is better to give it as an injection, especially where the flatulence is of the intestinal variety. If given by the mouth, about a drachm should be given for a dose; if as an injection, half an ounce or so beaten up with an egg in a pint of hot water. At the same time a flannel dipped in turpentine and laid over the abdomen will probably give great relief.

FLAX.—The name of the common flax-plant, and also of its most important product, the filaments obtained from the fibrous covering of its stem, and used in the manufacture of linen thread. The flax plant is cultivated and grows abundantly throughout Europe, Africa, and America. It thrives upon almost any good soil thoroughly pulverized and well drained, but more especially upon rich, sandy loams regularly supplied with moisture during the spring months. The preparation of the flax is a tedious process, which need not be explained here. The best of the coarser kinds of flax-thread comes from abroad, as does also the best spool-cotton.

Flax-Seed, the seed of the foregoing, are an excellent ingredient in poultices intended to allay inflammation; and when steeped in hot water for several hours they make the well-known flax-seed tea, so highly esteemed as a carminative, and mild cathartic.

FLEA.—The best security against fleas is to keep the rooms as free from dust as possible. They lay their eggs wherever they find dust and down combined, for in these consist the nourishment of their offspring; it is an almost certain prevention of their propagation, therefore, if carpets, blankets, and everything manufactured of wool, are so well attended to that dust is prevented from accumulating upon them. Children are the chief sufferers from fleas, and when these latter are known to be about, not only should the bed and bedding of the cribs be examined daily, but a lump of camphor should be put in the water in which the children are washed; it is said that this renders the skin obnoxious to the flea. Any strong perfume about the person diminishes their attacks, and the common pennyroyal makes its neighborhood untenable by them. When a flea is caught between the fingers, plunge them at once under water, or it will escape. If a dog is infested with them, put him in a tub of warm soap-suds, and they will rise to the surface; take them off and burn them.

FLIES.—Flies may be destroyed in great quantities by placing about the house open vessels filled with sweetened water and *cobalt*; six cents worth of cobalt is enough for a pint of water. *Carbolic acid* is also very good. (*See* CARBOLIC ACID.) Both these are poisonous, however, and must be used with great caution, especially if children are around. A harmless and very effective mixture may be made with half a teaspoonful of powdered black pepper, one teaspoonful of brown sugar, and one table-

spoonful of cream; place them on a plate where the flies are troublesome. A mixture of gum-arabic, honey, brown sugar and alum, in equal proportions, will answer the same purpose. Or, pour half a pint of boiling water upon a quarter of an ounce of quassia chips; when cold, strain it and sweeten with molasses or brown sugar. *Fly papers* are sold by the thousand. It is claimed for all of them that they are harmless to human life; chemical analysis, however, has shown that most of them contain ingredients which render their use far from safe, except with many precautions. It may be doubted whether any mixture or paper kills more flies than it attracts into the house; and the only way to be really rid of the nuisance is to fit frameworks covered with netting to the doors and windows.

FLOATING ISLAND.—I. *Take:*—Eggs, 4; milk, 1 qt; white sugar, 5 ozs; vanilla or bitter almonds, 2 teaspoonfuls; currant jelly and powdered sugar, 4 tablespoonfuls each.

Beat up the eggs, whites and yolks separately; into the yolks stir the sugar, and add the milk (hot), boil until it begins to thicken, and then remove from the fire. When cool, flavor it with the vanilla or bitter almond, stir it up well, and pour it into a glass dish. Beat the jelly and sugar into the whites of the eggs, and heap them upon the contents of the dish. Decorate the top with bits of bright-colored jelly cut into fanciful shapes.

II. Crush a pint of ripe raspberries with a gill of sugar; beat the whites of four eggs stiff; beat in slowly a gill of powdered sugar; press the raspberries through a strainer to avoid the seeds, and beat this in gradually with the egg and sugar, until so stiff that it stands in peaks. Serve on milk; to be eaten with cream.

FLOOR.—It is economy to have floors of narrow boards and good wood. Broad and poor boards shrink and leave wide cracks as vermin nests, and warp so as to stand up at the sides and ends and wear out carpets. Hemlock is probably the worst wood used for plain flooring, and spruce or yellow pine the best. Oak is preferable but expensive. The combinations of walnut with chestnut, oak, and other lighter-colored woods, now becoming frequent, are durable, and save the necessity of matting if carpets are removed in hot weather.

Polishing Hard-wood Floors.—There are three treatments, good according to the uses of the rooms. For a room much used, where furniture is pulled here and there, use only linseed oil, to be well rubbed in with the iron-backed, long-handled brush sold for the purpose. Heavy hand-rubbing will laboriously accomplish the same thing.

For a room not very much walked over, the mixture given under furniture polish will be best. (*See* FURNITURE POLISH, No. 3.)

For a room of gala use, shellac may be used. Wax and turpentine give less polish, but more durability; the oil gives best service, and a dull clean finish. All these things must be put on sparingly and well rubbed in. Having begun upon anything but oil, the treatment must not be varied. The pores of the wood get choked by all but oil, and, to change the treatment, must be either well scrubbed with turpentine, or, if too much clogged, planed off so as to get a new surface of wood. Dull spots can be rubbed off with a coarse cloth. With proper rubbing, no floor should be sticky.

Scouring needs a good-sized wooden pail for water, a wooden bowl for sand, a hard scrubbing-brush, and a piece of flannel rather more than a yard square. Scrub the floor with the brush, water, and sand, and afterwards wash off the sand with the flannel. Soap is sometimes used with the sand; but, instead of improving, it injures the color of the boards when dry, giving them a blackish appearance. If the boards are very dark-looking before the scrubbing is commenced, some fuller's earth or pearl-ash may be dissolved in the water; and plenty of clean water should afterwards be used.

FLORICULTURE.—If there be any room for choice in selecting the spot for a flower-garden, select one that is sheltered from the wind and exposed freely to the morning sun With the proper amount of care and watchfulness flowers can be made to grow anywhere, and no one, even if confined to the smallest of city back-yards, need be deterred from making the attempt; but most flowers love warm, sunny spots, where the chill northerly winds cannot reach them, and, if the garden is favorably located, a large part of the work and disappointment attendant upon floriculture may be avoided. As the laying out of the garden must depend largely on special local conditions, and should be guided by individual taste, we shall not attempt to lay down any general rules further than to suggest that the complicated and eccentric forms at one time so popular are no longer considered in good taste, and that that plan of arrangement is best which combines the greatest simplicity with a due amount of variety in the shape of the beds. A thing especially to be avoided, except in ribbon beds and "mosaic" planting, is the elaborate geometrical figures which the average books on flower-culture are so apt to suggest to their readers. In preparing the ground, raised beds with deep walks should be dispensed with as far as possible; they suffer from the intense heat of our summers, and the rains wash down their edges, giving an untidy look, and sometimes laying bare the roots of the plants. Grass edgings unless well cared for, are objectionable, on account of the difficulty of keeping the sods from spreading; and this is true of all running vine edgings except ivy. For a large bed, a border of common flax easily raised from the seed, is very pretty if kept well trimmed, and the dwarf box is unsurpassed. The prettiest of all beds are those neatly cut into the grass-plat and left without other edging. In these the brilliant hues of the flowers contrast well with the soft, emerald tint of the grass. It may be a slight objection to these beds that the dew on the grass makes it necessary to be well shod

in attending them in the early morning when flowers and the work of gardening are most attractive. The walks between beds may be trodden down and hardened with coal-ashes or gravel.

The most desirable *soil* for flowers is a mellow loam, that will not be much affected by excessive wet or drought.

As it is useless to attempt to grow flowers in poor soil, the work of fertilizing and amelioration must claim the earliest attention. If the ground be clayey and adhesive, dress it with sand and well-rotted manure in sufficient quantity to make it mellow and friable; spade it and mix it well. If the soil be sandy and loose, spade in clay and manure in the same way. Wood ashes are good for all kinds of soil, as they loosen those which are close, and hold moisture in those which are sandy. Every flower garden should be heavily manured every autumn,—the manure covering the ground during winter and being well spaded in in the spring. Drainage (natural or artificial) is absolutely essential to successful flower-gardening; no soil that remains saturated for many hours after even the heaviest rain is fit for the growth of flowers. Before it can be successfully cultivated it must be thoroughly underdrained.

For *Pot-plants*, a good soil may be made by taking one-fourth part of common soil, one-fourth part of well-decayed manure, and one-half of vegetable mould from the woods or wood-yard. Break up the manure fine, and sift it through a coarse wire sieve; then mix all the materials together thoroughly. When the common soil used is too adhesive, increase the proportion of mould. If the pots are large it may be well to cover their bottoms with an inch or so of potsherds, but the old fashioned gardeners' talk about "drainage" is sheer nonsense. Any flower-pot will be perfectly drained by the hole in its bottom. The soil for pot-plants should be removed every year, soon after the plants have blossomed. Loosen the earth from the pots by passing a knife round the sides; turn the plant upside down holding the fingers across the earth, and remove the pot; then take away all the matted fibres at the bottom and sides and all the earth, except what adheres closely to the roots; then re-pot in fresh soil, prepared as above.

In *planting flower seeds*, break up the soil until it is entirely free from large lumps, rake it over carefully, and rub that on the surface through the hands till it becomes powdery and soft. It is then ready for the drill. Seeds require to be planted near the surface or more deeply, according to their size. For seeds as large as sweet peas, the drill should be half an inch deep; the smallest seed should be simply laid on the surface, and a very little fine earth sifted over them, and afterwards pressed down with a trowel or with the palm of the hand. Never plant when the soil is very wet; in very dry weather, water the ground lightly at night, being careful not to use water that is too cold. If the seeds are small, sow a good many of them together, and they will assist each other in breaking through the soil. When the plants are about an inch high, thin them out, leaving many or few, according to the number required for the garden; it is best to leave a liberal margin for mistakes and mishaps.

Transplanting, unless the plant is taken up without separating it from the earth around its roots, retards the growth somewhat; if the soil around the roots be undisturbed, the growth is not interrupted at all. Transplanting should be done at evening, or better still, just before a shower. Take a round stick, sharpened at the end, and make holes to receive the plants. Set them a very little deeper than they were before, and press the soil firmly around them; then water, and cover for three or four days with an inverted flower-pot, or other vessel, or simply with newspaper. If a plant wilts after being transplanted, remove the larger leaves, and water liberally for a day or two.

The *watering* of plants is a subject on which floriculturists differ. Mr. Rand maintains that "if the soil is close or clayey, very seldom will water be required; if sandy or loose, more often, but each locality will have its own rules." Another writer argues that "in this hot, dry climate, the watering-pot is a necessity," "and if there are not plentiful showers, plants, should be watered freely every evening." Our own experience coincides with the latter view. Daily watering is not, as some suppose, an absolute necessity; but plants seldom thrive well through the feverish days of July and August without frequent and copious watering. The water for plants should not be very cold; a good way to take the chill off is to draw it in the morning, and let it stand all day in the sun. Rain-water is the best, and it may generally be obtained by having a hogshead standing in some place out of sight, under a spout connected with the roof. In watering, the water should never be dashed or poured on from a pail; but showered on slowly and gently from the rose of a watering-pot. In time of drought, syringing the leaves at evening is very beneficial to shrubs and plants.

Weeding, in a small garden is done most effectually with the thumb and finger. It is poor gardening to cut off a weed just below the level of the ground with a rake or hoe, for the root remains alive, gains strength, and nearly always sends up additional shoots. Of course in large gardens, the hoe must be depended upon, but pulling up the weeds by the roots is the only way of finally getting rid of them. The best time for weeding is very early in the morning; it is not well to weed at night, or on a rainy or cloudy day, for there is no sun to kill the weeds, which it is better to expose to the sun, that they may be thoroughly killed. Pull them up in the morning, let them lie exposed all day and gather them up in the evening. The better and less laborious plan is, however, to keep the ground so thoroughly raked that no weeds can become established.

Insects are very annoying in the garden; with the first warm days they appear in numbers,—covering the roses and settling down upon everything that is in bloom. Rain causes them to disappear, but a dry wind increases them. A small painter's brush dipped in quassia or aloes water will brush them off and destroy them. Hellebore (powdered) sprinkled over the leaves of plants about once a week will also help to protect them. The caterpillars of many moths and butterflies are destructive in the garden, and one death in the spring will save much warfare later in the season. If a moth is seen resting on a stem or leaf, with folded wings, it is probably a female, and should be killed at once. If one is found dead on a plant, she has doubtless laid her eggs, and these must be searched for underneath the leaves and *burned.* A garden syringe or hose is the most effective weapon against aphides and caterpillars; hold the pipe close to the plant, so as to bring a considerable stream of water upon it, and it will soon be freed from them. Every time the syringe or hose is used, rake the earth away from under the plants, and trample upon the insects that have been washed off. Earwigs are very destructive insects. Their favorite food is the petals of roses, pinks, fuchsias, dahlias, etc., they eat at night, and in the daytime hide away amid the dark leaves. They can be caught by driving stakes into the ground and over these inverting flower-pots, leaving them just room to crawl under; then look for and destroy them every morning. Toads and lady-bugs, on the other hand, are great helps, for they destroy vast numbers of the aphides, moths, caterpillars, etc.

When plants produce an abundance of foliage and no flowers, either remove them to a drier soil, or cut through some of the principal roots. Root shortening is often resorted to by florists to force plants to bloom. By checking the growth of the woody portions, strength is thrown into the flowers. All shrubs produce their flowers on the terminal points of branches; after the bloom is past, if they are pinched off, three or four new branches will come out in the succeeding year. As plants are in their most vigorous growth while in flower, they should never be transplanted at that time. Then is the time for taking cuttings, as they are most ready to send forth roots. The throwing off of its leaves by a newly-planted cutting is a sign that it has begun to grow, while if the leaves wither on the stem, it shows that the cutting had not strength enough to send out shoots. The ripening of seeds exhausts the strength of the plants; therefore remove all pods that are not especially desired for seed. A plant can be trained into any shape by pinching off the ends of young shoots, for the plant will avenge itself by sending forth two or three more in lieu of the one pinched off.

The preserving of plants in Winter is one of the most perplexing problems in floriculture. It is useless to try and make "window-gardens" with plants that have flowered all summer; these must have a period of rest or they will be worth nothing for another season. Nearly all bulbs, and all plants that have a woody nature, can be preserved in a cool, dark cellar, where potatoes will not freeze. Roses, fuchsias, heliotropes, oleanders, sweet verbenas, and in fact nearly all flowers, can be kept by laying them carefully down on the ground, and covering them with sods placed grass side up. Zonale Geraniums and Scarlet Salvias can be wintered in most cellars, if the earth is shaken from their roots, and they are tied up by them to the cellar beams. All blossom buds should be cut off, or the sap that is in the branches will cause them to bloom and thus rob the roots of the strength they need to live on through the winter. Roses and geraniums can also be buried in trenches. Dig the trench two and a half feet deep and where the water will not settle; line the bottom with straw or dried leaves, and lay the plants in; cover the plants with a board, so supported as not to press upon them, and fill in with sandy loam, finishing off the top with a ridge that will carry off water. All plants that are only slightly tender can be preserved by cutting off superfluous branches and binding straw around them so that no part will be exposed to the frost.

The care of *house-plants* is a matter requiring daily attention. As previously directed, the soil in the pots should be renewed every year. In winter, house-plants, except when well supplied with sun and air, should be watered only enough to keep them fresh; many are made sickly and spindling by giving them too much water when they have little light and fresh air. If from improper treatment they have become spindling, cut their heads entirely off, and sink the pot in earth or surround it with damp sand or sawdust and place it where the morning sun will strike it; often a new and flourishing head will spring out. Plants ought not to be kept very warm in winter, nor exposed to great changes of temperature. From 40 to 60 degrees is about the proper temperature, when a little sun and air are secured. In summer, the plants should be set out of doors, but for a time should be well shaded; for few house-plants can bear the full sun at first. When insects become troublesome, set the plants under a barrel, and burn a little tobacco in it. When plants are frozen, a copious sprinkling with *cold* water and a *gradual* restoration of warmth are the best remedies.

Were the space at our command, it might be desirable to add to the foregoing some suggestions as to the kind and number of plants to select for a garden; but often all this must be a matter of individual taste and opportunity, and full details are given under the separate plants whose names are scattered throughout the work. It only remains to add that the word "hardy," so often used in our descriptions, means that the plants to which it is applied will live out unprotected during the winter and require little attention. "Annuals" are plants that bloom and die down every year. "Biennials"

are those which run their course in two years. "Perennials" are those which grow and blossom year after year.

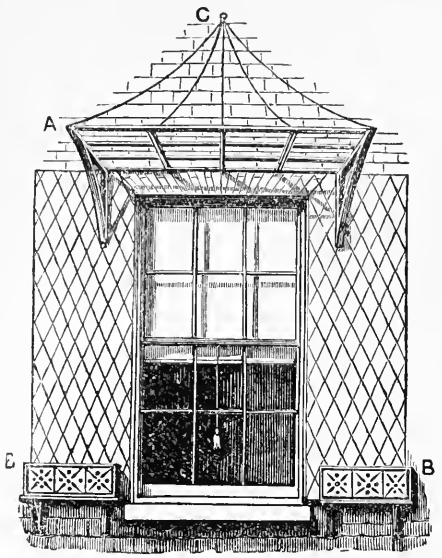


Fig. 1.

The three accompanying illustrations suggest simple and easy methods of training vines for ornamental purposes. Fig 1. shows the method of constructing a framework around a window. The material is wire, except the shelf above, which is of wood, and intended to support additional pots. Fig. 2 shows the same window with the vines in growth. The plan shown in Fig. 3 is exceedingly pretty, and may

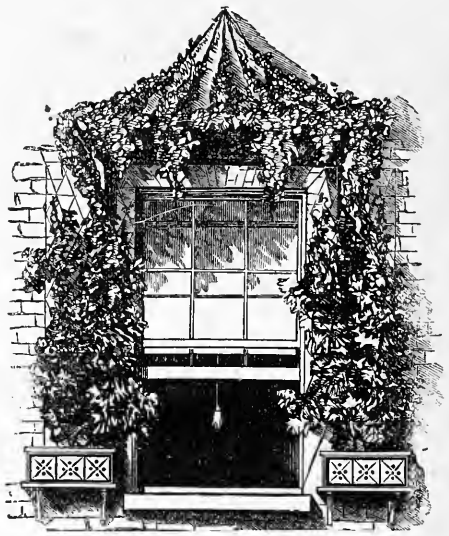


Fig. 2.

be applied either out of doors or in a conservatory. Ivy is the most satisfactory vine for indoor culture, but any quick-growing vine with abundant foliage will answer.

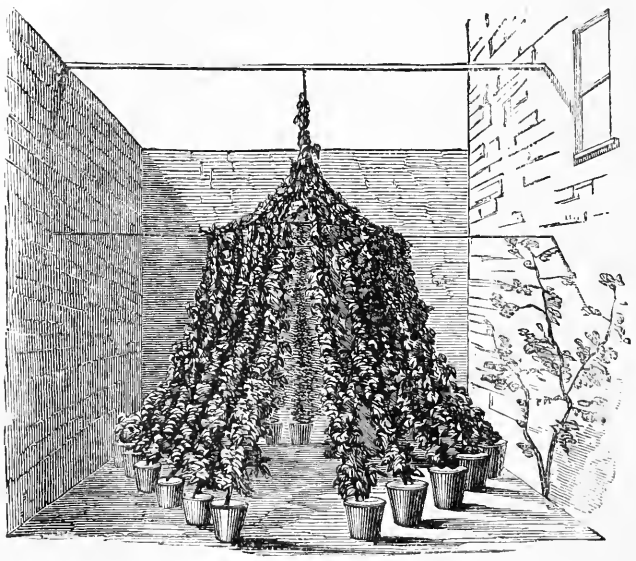


Fig. 3.

FLOSS.—Untwisted filaments of the finest silk, much used in embroidery upon satin, silk, broadcloth, etc. It comes of any color, in skeins containing about ten yards. In buying, test the strength, as some kinds are inferior, and well-nigh worthless.

FLOUNDER.—There are many different species of this fish, which is flat like bream, and very oblong. The most common variety is the "flake" or "spotted flounder," which

Flounder.

weighs on the average about two and a half pounds, and is in season from August to November. The "winter flounder" or "New York flat-fish," is a smaller kind, rarely weighing over ten or twelve ounces, and excellent for frying. It is in season from October to July. The flounder is a flat-fish, not esteemed as a delicacy, but sweet and easily digested.

Boiled Flounder.—Same as Bass or Blue-fish.

Fried Flounder.—Sprinkle the fish with salt, and let them lie two or three hours before they are dressed. Wash and clean them thoroughly, wipe them dry, flour them well, and wipe them again with a clean cloth; then dip them in egg and fine bread-crumbs, and fry them to a light brown in plenty of lard. If the fish be large, raise the flesh entirely from the bones, cut it into nice pieces, dip them in eggs and bread-crumbs, and fry as before.

FLOUR.—This term properly includes the finely-ground meal of any of the cereals, but it is commonly applied only to wheat-flour, and will be so used here, the other kinds being spoken of under the different grains. There is no article of food more universally used than flour, and none, perhaps, which it is more difficult to obtain pure. It is adulterated with rice flour, potato starch, pea flour, alum, plaster of Paris, sulphate of copper, and other materials which cost less than flour, or add to its weight at a cheaper rate. Rice, potato starch, and pea flour, are readily detected under the microscope by the form of the granules; plaster of Paris by being insoluble in water and sinking at once to the bottom of a glass of water when flour containing it is stirred in; alum by dipping bread into a decoction of logwood when a dark bluish color will be produced if alum be present; and sulphate of copper by a red color when prussiate of potash is added to bread moistened with water. A more convenient logwood test for alum is to macerate 4½ oz. of logwood chips in 8 oz. of spirits for twenty-four hours, and filter. A few drops of this solution, together with the same amount of the strongest solution of carbonate ammonia that water will make, added to moistened bread, or flour in a little water, will show a dark bluish color, if alum be present. These should be kept separately for the purpose. The easiest test with chalk, plaster of Paris, or other solutions is specific gravity; a vessel which will hold a pound of wheat flour will hold nearly a pound and a half of any other.

In buying flour, when no elaborate test can be applied, it is best to try it by testing it; in this way mustiness or sourness can generally be detected. Good flour has a yellowish tinge, and when pressed tight in the hand, *retains the creases of the skin impressed on it;* when rubbed between the thumb and fingers a slight grain should be felt. Poor flour sometimes has a dingy look, as if ashes was mixed with it. The only safe way is to buy a small sample, and, if it prove satisfactory on trial, then get a larger supply from the same stock.

Flour stored in barrels needs no other care than putting it in a cool, dry place, where it is well protected from rats, cockroaches, and other vermin. A tightly-fitting cover to the barrel is indispensable.

FLOWERS. (To cut and Keep.)—Flowers should never be gathered during the heat of the day, but either while wet with dew in the early morning or after sunset when the dew has revived them. Do not break them off, but cut them with a knife or scissors; the former is best, as it cuts cleanest and does not injure the plant. Sand is far cleaner to place them in than water; it can be wetted every morning and will keep for weeks without any unpleasant odor. If sand cannot be obtained, add a few bits of charcoal to the water; if the water is changed every day the flowers will then keep for a week or more. If it is desired to keep flowers for some time, about half an inch should be cut off from the ends of the stalks every time the water is changed; a pinch of saltpetre and salt added to the water tends to prevent their decay. Warm water will revive wilted flowers; put them into water warm to the hand, let them remain an hour or more, then cut off the stalks a little and put into fresh lukewarm water, and they will brighten wonderfully. A few drops of liquid ammonia added to the water, is also excellent to revive them. *See* FLORICULTURE and FLOWERS under their respective names.

FLUE.—Wherever metal flues pass near woodwork (which is to be avoided if possible), the latter should be well guarded by reflecting plates of metal, like tin or zinc, and some space should intervene between the two so as to allow a current of air to pass through. If the pipe must be supported it should only be by thin, though strong arms of metal wire, by which the heat is prevented from being communicated in sufficient amount to raise the temperature of the wood to a dangerous degree. Smoking flues are to be treated the same as smoking chimneys. (*See* CHIMNEYS.)

FLUIDS.—Fluids taken into the stomach

are not subject to the slow process of digestion, but are immediately absorbed and carried into the blood. This is the reason why liquid nourishment restores from exhaustion more speedily than solid food. When food is chiefly liquid (soup, for example), the fluid portion is rapidly absorbed; and the solid parts remain to be acted on by the gastric juice. In the case of Alexis St. Martin, in fifty minutes after taking soup, the fluids were absorbed and the remainder was even thicker than is usual after eating solid food. It is because of this that soups are considered bad for weak stomachs, for this residuum is harder to digest than ordinary food. Tea and coffee, and other warm drinks are so exhilarating after fatigue because that portion of them which acts as food enters into the blood almost immediately.

FLUMMERY.—*Take:*–Cream, or milk, 1 qt; sweet almonds, 5 or 6 oz; bitter almonds, 4; sugar, ½ lb; potato flour, or corn starch, 6 oz.; eggs (whites), 10; lemon peel or vanilla.

Blanch and pound the almonds to a paste; put them in the milk over boiling water, when a film covers the milk, stir in the flour which has been mixed smooth in a little cold milk, when it has thickened to a batter remove from the fire and stir in the eggs beaten to a stiff froth, then pour in moulds wet with cold water. Serve cold with sugar and cream. If lemon is liked, scald thin strips of the rind in the milk until flavored. Extract of vanilla may be added.

FLUTING. (*See* CRIMPING.)

FLUX. (*See* DYSENTERY.)

FOMENTATIONS.—Warm lotions applied to diseased parts by means of flannels. They are often prescribed by physicians, and it is well to know how to manage them. The best way is to have some pieces of flannel or blanket, first cut to the required size, and then soaked thoroughly in water just hot enough to be grateful to the patient. Place beneath the part to be fomented some water-proof or oil-cloth, and then having had the flannels wrung nearly dry in a towel twisted by two assistants, wrap them around the limb, or lay them flat on the injured part, and over them bind some water-proof or thoroughly dry and thick covering; repeat the whole process as often as may be necessary.

FONDU.—**I.** *Take:*–Cheese, 4 oz; eggs, 6; butter, ¼ lb; salt, pepper, and cayenne.

Grate two ounces each of Gruyere and Parmesan cheese (common cheese will do, but is not so nice) into a basin and season with salt, pepper and cayenne; add the yolks of six eggs, and a quarter of a pound of melted butter; whip the whites of the six eggs, and stir them gently with the other ingredients. Line an ordinary cake-mould with a strip of writing paper six inches high; pour the mixture in, and bake fifteen minutes in a moderate oven. Serve very hot.

II. *Take:*–Cheese, 3 oz; eggs, 5; milk or cream, 1 pt; butter, 2 oz; potato flour, or arrowroot, 2 oz; salt and pepper.

Mix a quarter of a pint of milk and two ounces of potato flour or arrowroot to a smooth batter; heat three-quarters of a pint of milk (or cream in preference) to boiling, and pour it in; stir them well together, and then add two ounces of butter cut small. When this is melted and beaten thoroughly into the mixture, add the well-beaten yolks of five eggs, half a teaspoonful of salt, a little cayenne, and three ounces of lightly-grated cheese. Whip the whites of the eggs to a stiff and solid froth, stir them in gently, and bake as before about 20 minutes. This is very nice.

FOOD.—A food is a substance which, when introduced into the body, supplies material which renews some structure or maintains some vital process; and it is distinguished from a medicine in that the latter modifies some vital action, but does not supply the material which sustains such action. It is essential to the idea of a food that it support or increase vital actions; whilst medicines usually may lessen, increase, or otherwise modify some of them. "Foods are derived," says Dr. Edward Smith, "from all the great divisions of nature and natural products, as earth, water and air, solids, liquids and gases; and from substances which are living and organic, or inanimate and inorganic. The popular notion of food as a solid substance derived from animals and vegetables, whilst comprehensive is too exclusive, since the water which we drink, the air which we breathe, and certain minerals found in the substance of the earth, are, adopting the definition given, of no less importance as foods. It is, however, of great interest to note how frequently all these are combined in one food, and how closely united are substances which seem to be widely separated. Thus water and minerals are found in both flesh and vegetables, whilst one or both of the component parts of the air, viz.: oxygen and nitrogen, are distributed through every kind of food which is alone capable of sustaining life. Hence, not only may we add food to food to supply the waste of the body, but we may within certain limits substitute one for another as our appetites or wants demand. . . .Further, there seems to be an indissoluble bond existing between all the sources of food. *There are the same classes of elements in flesh as in flour, and the same in animals as in vegetables.* The vegetable draws water and minerals from the soil, whilst it absorbs and incorporates the air in its own growth, and is then eaten to sustain the life of animals, so that animals gain the substances which vegetables first acquired. But in completing the circle the vegetable receives from the animal the air (carbonic acid) which was thrown out in respiration, and lives and grows upon it; and at length the animal itself in whole or in part, and the refuse which it daily throws off, become the food of the vegetable. Even the very bones of an animal are by the aid of nature or man made to increase the growth of vegetables and really to enter into their structure; and being again eaten, animals may be

said to eat their own bones, and live on their own flesh." It will be seen from this that animal and vegetable foods contain precisely the same elements though in different combinations. At the same time they differ sufficiently to make a due proportion of each necessary to perfect nutrition. One sterling point of difference is, that nitrogen constitutes a much larger percentage of animal bodies than of vegetables. Nitrogen is one of the most important elements of food; only such substances as contain it can efficiently produce flesh or repair wasted tissue. So important is this distinction, in fact, that one of the divisions of food most generally recognized by physiologists is into *nitrogenous* and *non-nitrogenous*, or as Liebig termed them, the flesh-forming and the heat-producing. Both kinds are essential to the maintenance of life, and it is because vegetables as a whole are deficient in nitrogen that the highest degree of bodily vigor cannot be kept up by them alone.

It is understood that the structures of the body are in a state of continual change, so that atoms which are present at one hour may be gone the next, and when gone, the structures will be so far wasted, unless the process of waste be accompanied by renewal. But the renewing substance must be of the same nature as that wasted, so that bone shall be renewed by the constituent elements of bone, and flesh by those of flesh. This is the duty assigned to food,—to supply to each part of the body the very same kind of material that it lost by waste. As foods must have the same composition as the body, or supply some such other materials as can be transformed into the substances of the body, it is desirable to gain a general idea of what these substances are. The following is a summary of the principal materials of which the body is composed:—

Flesh, in its fresh state, contains water, fat, fibrin, albumen, besides compounds of lime, phosphorus, soda, potash, magnesia, silica and iron, and certain extractives, whose nature is unknown. Blood has a composition similar in elements to that of flesh.

Bone is composed of cartilage, fat, and salts of lime, magnesia, soda and potash, combined with phosphoric and other acids.

Cartilage consists of chondrin, from which gelatine is formed, with salts of soda, potash, lime, phosphorus, magnesia, sulphur and iron.

The brain is composed of water, albumen, fat (so-called), phosphoric acid, osmazome and salts.

The liver consists of water, fat, and albumen, with phosphoric and other acids in conjunction with soda, lime, potash and iron.

The lungs are formed of a substance called connective tissue, from which gelatine is formed by prolonged boiling, albumen, a substance analogous to caseine, various fatty and organic acids, with salts of soda and iron, and water.

Bile consists of water, fat, resin, sugar, fatty and organic acids, cholesterin, and salts of potash, soda, and iron.

Hence, it is requisite that the body should be provided with salts of potash, soda, lime, magnesia, sulphur, iron and manganese, as well as sulphuric, hydrochloric, phosphoric, and fluoric acids and water; also, nearly all the fat which it consumes daily, and probably all the nitrogenous substances which it requires and which are closely allied in composition, as albumen, fibrin, etc. "So great an array of mysterious substances," says Dr. Smith, "might well prevent us from feeding ourselves or others if the selection of food depended solely upon our knowledge or judgment; but it is not so, for independently of the aid derived from our appetites, there is the great advantage of having foods which contain a proportion of nearly all these elements; and combinations of foods have been effected by experience which protect even the most ignorant from evil consequences. Thus flesh or the muscular tissue of animals, contains precisely the elements which are required in our flesh-formers, and, only limited by quantity, our heat-generators also; and life may be maintained for very lengthy periods upon animal food and water. Seeing, moreover, that the source of flesh in animals which are used as food, is of vegetable origin, it follows that vegetables should contain the same elements as flesh, and it is a fact of great interest that in vegetables we have food elements closly analogous to those contained in the flesh of animals. Thus, in addition to water and salts, common to both, there is vegetable chondrin, vegetable albumen, vegetable fibrin, and vegetable casein, all having a composition almost identical with animal albumen, fibrin, chondrin, and casein." The articles containing most of the three articles needed generally in the body are as follows: for fat* and heat-making—butter, lard, sugar and molasses; for flesh or muscle-forming—lean meat, cheese, peas, beans, and lean fishes; for brain and nerves—shell fish, lean meats, peas, beans and very active birds and fishes, who live chiefly on food in which phosphorus abounds. In a meat diet, the fat supplies the carbon for keeping up the heat of the body, and the lean furnishes nutriment for the muscles, brain and nerves. Green vegetables, fruits and berries furnish additional supplies of the acids, the salts, and water needed. Since the analogy between *animal* and *vegetable* foods is so close, substantially the same elements being found in each, it may be asked, what is the practical difference between them for purposes of nutrition? As a general rule, then, it may be said that while flesh presents the elements of nutrition in a form the most compendious and easy of digestion, vegetables are composed of substances which must not only be digested but thoroughly transformed before they can be

* This is of course intended only as a general statement. The fat in our bodies is directly derived from nitrogenized tissues: When the non-nitrogenized principles are excluded from our food the body becomes lean, because the nitrogenized tissues are consumed in the production of heat, instead of being converted into fat.

used for the reparation of the body. The cooking of flesh is doubtless desirable, although it is not necessary to its digestion, but the cooking of most vegetables is essential, in order to enable the stomach to dissolve and perfectly transform them. A good test is the amount of matter which leaves the bowels after the consumption of vegetable and animal foods; and if quantities supplying an equal amount of nutriment be taken, the refuse from the former will be twice as great as from the latter. It is commonly assumed, and is one of the leading arguments of the vegetarians, that the digestion of vegetables is easier than that of animal food, and that the process is more quickly performed; but the experiments of Dr. Beaumont, upon the stomach of Alexis St. Martin, have shown that mutton is digested more quickly than bread, and an egg sooner than a potato. To this must be added the fact that a greater bulk of vegetable than of animal food is required to provide a given amount of nutriment, and hence, those who live chiefly on the former must be large eaters. Dr. Edward Smith, discussing this point, says: "When we compare them it may be stated generally, that vegetable food must be eaten in larger quantities, and be better cooked, than animal food, and that it requires a longer period for and greater power of digestion, whilst it excites the vital processes more slowly, and in a lower degree."

The following table, showing the average quantity of nutritive matter in 1000 parts of several varieties of animal and vegetable food will illustrate some of the points previously made:—

Beef	260	Turnips	42
Veal	250	Cabbage	73
Mutton	290	Beet-root	148
Pork	240	Cucumber	25
Brain	200	Strawberries	120
Chicken	270	Pears	160
Cod	210	Apples	170
Haddock	180	Gooseberries	190
Sole	210	Cherries	250
Bones	510	Plums	290
Blood	215	Apricots	260
Milk	72	Peaches	200
White of egg	140	Grapes	270
Wheat	950	Melons	30
Rice	880	Tamarinds	340
Barley	920	Almonds	650
Rye	792	Potatoes	260
Oats	742	Carrots	98

Water, coffee, tea, cocoa, and other drinks are simply liquid foods, each supplying nutriment in greater or less amounts, and repairing waste. Alcohols are generally excluded from the list of foods, but taken in limited quantities and under proper conditions, it is thought that they promote digestion and stimulate the conversion of food into tissue and blood. Atmospheric air is also ranked among the foods by modern physiologists, since from it chiefly is derived one of the most important and necessary elements of nutrition, oxygen.

The effects of cooking upon food must not be overlooked. This effect is two-fold. It softens and disintegrates the substances which are naturally too hard for digestion, and thus renders them amenable to the digestive operations; this is the effect produced upon many vegetable substances, such as starch, grains of every kind, and all substances having a resisting envelope or a tough and solid texture, such as peas, beans, potatoes, turnips and the like. In animal substances, on the other hand, the most useful effect of cooking appears to be the partial transformation of the albumenoid matters, as in roast meat, whereby they acquire a peculiar and agreeable flavor. There is reason to believe that this flavor, besides being pleasant to the palate, stimulates the secretion of the digestive fluids which are essential to its conversion into substances capable of being appropriated by the body. (*See* DIET.)

FORCE-MEAT. (*See* STUFFING.)

FORK.—Forks for table use are now generally either of silver or silver-plated ware, and either of these is in every way preferable to steel or German silver. For the commoner kinds, stag's horn makes very durable handles, the surface of the horn being left in its natural state; these are often used for large carving-forks. Bone handles are made of the shank bone of the ox; some of the bones are very dense and hard, but they do not keep their color, and are very liable to crack if dipped in hot water. Neither these nor ivory handles should ever be put into water at all. Those who cannot afford silver forks can now get good plated ones at a moderate price, which will wear at least as well as steel ones and their use is to be strongly recommended, on grounds both of convenience and elegance. Try to get those with extra plating on the outer prongs.

FOWL. (*See* CHICKEN, and POULTRY.)

FOXGLOVE.—A large herbaceous plant, of which there are many varieties, with purple, white, rusty, and variegated flowers. The common foxglove has large and numerous flowers of a bright rose color, spotted white and purple on the inside, and hanging down from the stem in beautiful racemes. The plant is a biennial, and therefore the seeds should be sown every year. Sow as soon as the frost is out of the ground. It blossoms in July and August.

FRACTURES.—These accidents often happen where surgical aid cannot be obtained at once, and perhaps not at all, but fortunately the most inexperienced eye can detect when one of the larger bones is broken, and the treatment is generally very simple, at least until the arrival of the doctor. In case of such an accident, however, the doctor should be sent for at once, and be careful, if in the country or at some distance from the doctor's house, to forward a clear statement as to the apparent nature of the accident, which limb is hurt, and where and how it happened—this will enable him to bring the proper instruments and apparatus, if any are needed. Where an arm or leg is broken, it is far better to slit open the dress with a pair of scissors than to pull it off; but however the uncovering of the limb may be managed, it must be done very slowly and gently, and the limb should be supported so as to prevent jarring or shaking to the damaged part. It must be care-

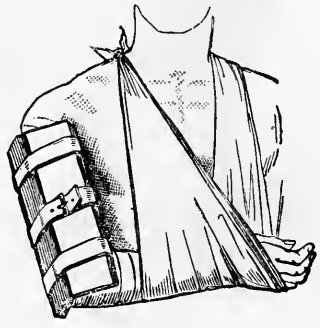
fully kept, too, in the right direction, for otherwise some sharp splinter of bone may penetrate the hitherto unwounded skin.

In fractures of the lower limbs occurring at a distance from home, the jolting of a carriage or wagon should be avoided, and the patient carried. A door, a broad plank or shutter, a large sack cut open, a sheet or blanket or piece of tarpaulin fastened at the corners to two strong hoe-handles or sticks, makes an excellent hammock, carried by four men.

Splints are needed in case of injury to the arm or hand, and these can easily be made of thin board or stiff card-board, a cigar-box, or an old band-box cut into strips the width of the hand or a little wider, or any hard, unyielding and light material; whatever is used, let it be long enough to reach from a little beyond the elbow to a little beyond the ends of the fingers. Cover this with a pad of soft hay, hair, wool, cotton, or anything soft, and then both the arm and hand will rest comfortably. For a sling, suspend a handkerchief or strip of cloth around the neck, bearing in mind that the hand must not hang lower than the elbow.

Pain and swelling are the immediate or early results of a fracture, and it is better for a non-professional in treating a case to allow several hours, or even a day or two, to elapse before he ventures to apply the splints and bandages as a permanent dressing. Yet the limb must not be left quite alone. Lateral support should be given it by small pillows, pads of tow, folded sheets, or some other soft material; and cold applications, such as lint dipped in cold water, will aid in removing the swelling. If the leg or thigh be broken, the limb may be placed in its proper direction on one or more long pillows, and these tied at intervals around it with some tapes or cravat bandages. In every case of fracture the patient must be kept quiet and free from excitement, and not allowed to exert himself until the wound is thoroughly healed.

Arm (Above the Elbow).—There is only one bone here. Provide four splints, with a soft pad to each, to reach from the shoulder to the elbow-joint; place one behind, one before,



Fractured Arm.

and one on each side, and secure them well with a bandage or straps. Use the sound arm as a model to shape the splints by. Carry the arm in a sling.

Arm (Below the Elbow).—Here there are two bones, and one or both may be broken. If you try to raise the arm by taking hold of the wrist you will easily detect it. In dressing, hold the arm bent, with the thumb uppermost—as if the person were going to lay the palm flat

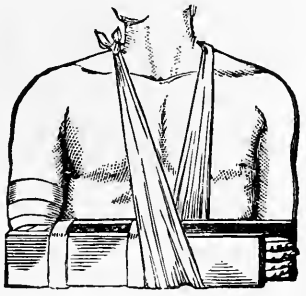


Fig. 1. Fractured Fore-Arm.

against his chest; place one splint along the palm of the hand to the bend of the arm, and the other along the back of the hand to a little

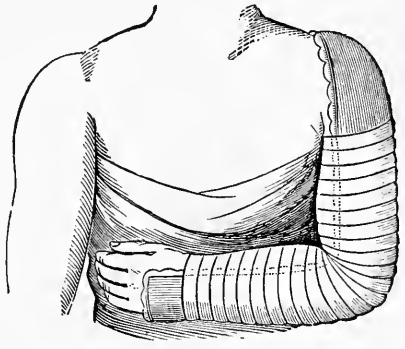


Fig. 2. Fractured Fore-Arm.

beyond the elbow; apply a wet bandage or straps loosely to keep them steady, and carry the arm in a sling. In bandaging the first two or three days allow for swelling.

Collar-bone.—This bone runs from the top of the breast-bone to the shoulder, and is generally broken near the middle. On the sound side the bone is smooth and even, on the injured side you will observe the lump caused by the broken ends rising one over the other, and if the shoulder be pulled forward, you will see the parts move and the patient will suffer pain. In a child the collar-bone does not break with a clean fracture as in an adult; the bone bends to some extent and then *cracks* without breaking through. It is important to remember this, for in a child you will not see the ends of the bone move as they do in an adult. In treating, prepare a round pad the thickness of a man's arm and five inches long; push the shoulder backwards, and press with the other hand on

the fracture till you get it in its place; put the pad into the arm-pit, and secure the arm with a bandage round the body, as shown in Fig. 1;

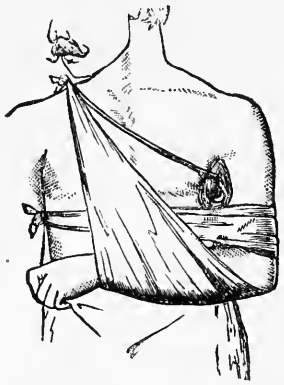


Fig. 1. Fractured Collar-bone.

raise the fore-arm well up in a sling. A better way of dressing it is that shown in Fig. 2. Take a band of stout cloth, three or four inches wide and five yards long. Lay one end on the shoulder, bring the band down the front, around the elbow, and up the back of the shoulder; then across the breast to under the other arm; and then twice around the body. Draw the bandage tight. Take the patient to a surgeon, and let him show you how to fix it perma-

Fig. 2. Fractured Collar-bone.

nently; you will have to watch over it for a month.

Elbow-joint.—It sometimes happens that the sharp bone which projects at the back of the elbow is broken by a fall or blow. The arm cannot then be used; and if you compare the two arms together, you will find that the point of the elbow is gone, and is drawn up towards the back of the upper arm. Keep the arm *quite straight*, place a long well-padded splint on the inside, and bandage both above and below the elbow.

Hand, Foot, or Ankle.—These bones are solid and are almost always wounded by some such accident as breaks or crushes the bone, such as by machinery, threshing-machines, etc., and are always serious. A doctor must be sought at once; and in the mean time cover the wounded part with several folds of rags or handkerchiefs, dipped in cold water. If water is not at hand, wrap it up in a good handful of damp grass. If there be much bleeding, dip the wound into cold water if you can find any. If the hand is wounded, *hold it on the top of the head.*

Head.—Any accident sufficiently severe to fracture the bones of the head or face, or to cause the person to remain insensible, needs immediate medical attention. All that a non-professional can venture upon is to place the patient in a reclining posture with the head raised, apply cold water to the injured part, especially if there be bleeding, and keep down all noise and excitement.

Hip-joint.—The bone here is liable to be broken in aged people from any slight causes. Sometimes the person feels something crack in the hip, and cannot stand or rise from the ground; if placed upright, you will find that the injured limb is shorter than the other, and the foot turns outwards. Remove the clothes carefully, and keep the patient quietly in bed till the doctor comes.

Jaw.—The lower-jaw is sometimes broken by a blow. It is not difficult of detection; the bone in its whole outline is so easily examined by the fingers that irregularity or change of direction must be noticed at once. If there is but little displacement, it will be enough to support the injured bone by one or more

Fractured Jaw.

bandages, so applied as to retain the jaw in place; they may be tied, one at the back of the

neck and another across the top of the head, If, however, there be displacement and separation, so that the two ends cannot be easily kept in the same place, a further arrangement must be contrived. This will best be done by employing a piece of *gutta percha*, moulded so as to form a cover for the jaw on both sides, and in its whole length; this will give a perfect support, and may be kept in place by bandages applied as above directed. Three weeks or more will pass before the bones will unite thoroughly; and during this period the patient must be supported on soups, beef-tea, and other liquid food.

Knee-cap.—The cap of the knee is usually fractured by falling on the knee, or trying to prevent falling. As soon as it happens, the person has lost all power of standing on that leg, and if placed upright drops down again instantly. The bone is split across, and has left a gap similar to that of the elbow when the bone is broken. Keep the leg quite straight, placing the splint along the back of the limb; and treat in exactly the same way as the elbow-joint. When the patient is obliged to move, pass a strong bandage round the neck, over the shoulder, and under the foot, and draw it so tight that it will entirely support the weight of the leg.

Leg (Below the knee).—Here there are two bones as in the fore-arm. If the small one be broken, you may have great difficulty in finding it, and it is of no consequence, as the large one will act as a support. If both bones are broken, the patient is unable to raise his limb, there is distortion and swelling, with pain, at the place of fracture, and the ends of the bone will move on one another slightly if the foot be raised. This fracture may be treated by the employment of two side splints; these should be applied, one to each side of the limb, and retained in place by straps or bandages. The patient should then lie on the side corresponding with the fracture, keeping the limb as quiet and moving it as seldom as possible. Or the patient may have the less irksome position on his back if the fractured limb be steadied by a straight outside splint, which should be made of wood four fingers in width, to reach from the knee to below the foot, and with the lower end notched as in the long thigh splint. The inequalities about the ankle are great, so that the padding must be abundant and well arranged; the limb must be tightly fixed to the splint by means of a bandage or straps. Four or five weeks confinement must be insisted on after a fracture of this kind.

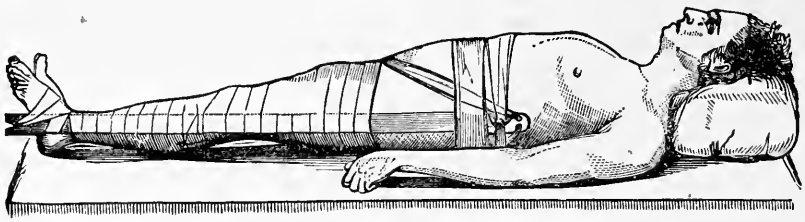
Ribs (Without a wound).—The symptom of a broken rib, after a blow or fall, is an aching pain, which becomes sharp on taking a deep breath, and is referred to one particular point which is very painful if pressed; or, if the ribs near the back-bone be suddenly pressed, pain will be felt, not where you press, but where the bone is broken. If there be spitting of blood, keep the patient quiet and give no stimulants. If there be a bruise, apply hot fomentations or a large hot poultice; then wrap a bandage of flannel six inches wide round the chest to support the injured part; draw this tight, and sew it on with large stitches, not placed opposite each other, but more like what is called the "herring-bone stitch;" tighten it from day to day as required. If the accident happens at some distance from the house, tie a handkerchief firmly over the clothes till you reach home.

Ribs (With a wound).—If the wound be merely a scratch, after applying the fomentations, use a bit of lint and plaster, and bandage as before; but if it be at all deep, even if you do not think it has gone through into the chest, put on some folds of wet rag and a bandage. Let the patient lie on the injured side, and keep him as quiet as possible till the doctor comes. In all cases of a wound to the chest, the person must lie on the wounded side.

Thigh.—Fracture of the thigh may occur at any point throughout the shaft of the bone, and is ascertained by the person not being able to raise the leg, and by pain when he attempts to do so. The greatest trouble in this case arises from the violent spasms of the muscles, which draw the broken bone out of its place and cause great suffering. If the accident occurs in the fields, or away from home, get some stiff straw, reeds, bits of very thin boards, or if anybody has a stiff hat, knock the crown out, split up the body, and bind this rather tightly with handkerchiefs, suspenders, etc., round the broken limb. On reaching home, if the spasms be severe, put a strong bandage round the ankle, cross it over the instep and bring the ends together under the foot, and to this sling a brick or any convenient article weighing about eight pounds. Let this hang over the foot of the bed, so as to draw down the leg; it will afford great relief, and in the mean time the doctor must be summoned.

The best dressing for a fractured thigh is a long splint on the outside of the leg, with a shorter one on the inside. For an adult the splints should be about four fingers in breadth, and thoroughly well padded. The outer one should project some four inches below the foot, and reach up to midway between the upper prominence of the thigh-bone and the arm-pit. In the first place, the whole leg should be evenly bandaged from toes to groin; then apply the outer splint, and fasten the leg firmly to it. It is customary to have two deep notches cut at the lower extremity of the splint, and two holes bored through it close to the upper end. The foot must be fixed to the lower end by carrying the bandage round the ankle and instep, and then, after each turn, through the notches just mentioned. Then the leg, to a little above the knee, must be bandaged to the splint; and, this point reached, the upper end of the splint must be fixed so as to prevent shortening at the fractured point, by passing a folded handkerchief round the groin, the two ends of which may be threaded through

the holes at the upper extremity of the splint, and firmly knotted. The inner splint, reaching only from inside of knee to the groin, should now be put on, and the bandage carried upwards round and round so as to encircle the whole, and retain both splints in close contact with the thigh. Pocket handkerchiefs or strips of cloth should fasten the splint to the abdomen, the knot in tying them being made upon the splint. The patient must of necessity lie on his back



Fractured Thigh.

during recovery, and six or eight weeks will pass over before the fracture is thoroughly healed.

FRAMES (Gilt).—To preserve them from flies in summer, boil three or four onions in a pint of water; then with a painter's brush dipped in the infusion, wash over the gilded portions of the frames. Once during the spring and summer will be often enough to apply it.

FRANGIPANE.—A French paste used for tartlets or any kind of pastry. It is made by moistening two ounces of flour with a little milk, and heating the two together in a saucepan; then add three or four eggs, and stir together till cool enough to make up with the hand.

Frangipane de Pommes-de-Terre.—Cook some potatoes by steam, take off the skins, and mash them well; then put them into a basin, add some eggs (four to a pound of the potatoes), a little butter, salt, grated citron, some bitter macaroons, sugar or not, according to taste, and use it as a paste in all sorts of *entremets* of pastry.

FRECKLES.—These are commonly constitutional, appearing in childhood and lasting through life. Sometimes they seem to be caused by exposure to sun and wind, and then they disappear to a great extent with removal of the cause. Treatment of the permanent freckles has generally very little effect, but the following applications may be tried:—Take of muriatic acid, one drachm; rain-water, half a pint; spirit of lavender, half a teaspoonful; mix. Apply it two or three times a day to the freckles with a bit of linen, or a camel-hair pencil. Or, with one ounce of elder-flower ointment, mix twenty grains of sulphate of zinc. Rub this into the skin at night, and next morning wash with soap and water and apply a lotion made of half a pint of infusion of rose-leaves, mixed with thirty grains of citric acid. If these applications irritate the skin, use as a lotion: almond mixture, half a pint; Goulard's Extract, half a drachm.

FRENCH CHALK. (*See* CHALK.)

FRENCH COOKERY (Terms used in).—Such of the dishes and processes peculiar to French cookery as it seems worth while to direct attention to, have been treated of in their appropriate places; but the descriptive terms used in that cookery are now so commonly introduced into culinary and other treatises that a vocabulary of them can hardly fail to prove practically useful here:—

Allemande, velouté sauce reduced and thickened with yolks of eggs.

Assiette volante, dish passed round.

Au naturel, cooked and served in its natural state; plain.

Baba, a light sort of cake, served as a remove to the second course roast.

Beignet, fritter.

Bisque, a soup of shell-fish and game.

Blanc, a rich white broth in which game, poultry, etc., are cooked.

Blancher, to render white, to remove hulls.

Blanquette, scollops cut from cold roast joints and warmed in allemande sauce.

Boudin, an oblong quenelle poached in broth filled with minced red tongue, truffle, etc.

Bouilli, boiled fresh beef with vegetables.

Braising, a process of cooking with fire on the cover of the pot.

Brioche, a light sort of cake.

Buisson, a high standing dish of sugar-work and pastry.

Caramel, burnt sugar, for coloring soups.

Casserole, a mould of rice, a stewpan.

Chartreuse, game, chicken, etc., put in a mould, lined with vegetables in a rich pattern.

Compotier, a dish to hold the compote.

Court Bouillon, a preparation of wine, water, and savory herbs in which fish is cooked.

Consommé, a strong, clear, sparkling soup.

Cullis, a very rich white or brown gravy.

Croustade, bread carved to represent a vase, etc., to hold ragouts and other preparations.

Croquettes, a sweet or savory preparation, bread-crumbed and fried *crisp.*

Croûtons, fried bread cut for garnishing.

En papillote, cooked in oiled paper.

Entrées, made dishes, for the first *course.*

Entrémêts, dressed vegetables, large salads, sweets of all description, hot jellies, etc.

Espagnolé, one of the grand stock sauces, from which is made the special sauces—brown.

Farcie, forcemeat.

Feuilletage, puff paste.

Fricandeau, a piece of the inside of leg of veal, larded and stewed.

Friture, frying-pan.

Gateau, cake.

Gras, made from meat.

Glace, a term employed promiscuously, but simply meaning a shining surface, whether a cake iced, or a ham glazed.

Gratinate, to make rich by reducing.

Grenadins, the fricandeau piece of veal cut into thick cutlets.

Jardinière, a vegetable garnish boiled down in its own gravy.

Liaison, a thickening of yolk of eggs diluted.

Macédoine, many varieties of vegetables boiled down as jardinière.

Maigre, made without meat.

Marinade, a preparation for enriching the flavor of meat, fish, etc., made of wine, vinegar, water, herbs, and vegetables, of oil, vinegar, etc., and of liquor, sugars, and spices.

Miroton, a rechauffé, very nicely prepared.

Nouilles, a paste of flour, cream, and eggs.

Noix de veau, technical term meaning cushion, that part of the leg of veal next the udder.

Paner, to bread-crumb.

Panieres, to cover with bread-crumbs.

Passer, to fry lightly.

Pigné, to lard on the surface only.

Poelée, a *braise* to enrich game, etc.

Potage, soup or light broth.

Profitrolles, a light pastry used as an entrémêt.

Purée, meat, vegetables, fish, etc., after being cooked, chopped fine, pounded in a mortar to a smooth paste, rubbed through the tamis, diluted with the liquor it was cooked in.

Quenelles, a rich *farcie* moulded in forms and poached in broth.

Ragout, consisting of one or more ingredients in a rich brown or white cullis.

Rissoles, small pastry consisting of either savory or sweets, fried.

Roux, a thickening of flour and butter.

Salmi, a hash of game served in a sauce made of the trimmings.

Salpiçon, a preparation of red tongue, ham, mushrooms, and chicken or game, chiefly used to fill *boudins*, croquette, *bouchées*, etc.

Sauté, to cook quickly over a sharp fire with just enough oil or butter to prevent sticking.

Sautoir, sauté-pan.

Tamis, a sieve of fine cloth wire, also of coarse woollen cloth.

Timbale, a pie raised in a mould.

Toppot, the surface fat from the common stock-pot.

Tourte, a tart, of fresh or preserved fruit.

Vanner, to use sauce with a small ladle in peculiar manner.

Velouté, the grand stock sauce for *white* sauce, as Espagnolé is for brown.

FRICASSEE.—A dish made of chickens or any small animal, dressed or fried. Receipts for various kinds of it are given in different parts of the work. (*See* CHICKEN, FROG, PARSNIP, VEAL.)

FRIEZE.—A kind of coarse woollen cloth or stuff, resembling baize, with a nap on one side, this nap is of a peculiar kind, consisting of little tufts or burrs, called the *friezing*, which is made by the machine in weaving. It comes only in dark colors, and is a yard wide.

FRINGE.—Fringes are for furniture, or for ladies' dresses. The former are from two to four inches deep, and comes in three varieties: *plain head, plain head and bullion*, and *gimp head.* Those for dresses are called "fancy fringes," are made of worsted or silk, and come from half an inch to three or four inches in width.

FRITTERS.—*Take:*–Flour, 1 pt; eggs, 4; boiling water, 1 pt; salt, 1 teaspoonful.

While the water is boiling, stir in the flour gradually, and let it boil three minutes, stirring all the time; take from the fire, stir in the yolks of the eggs, one by one, and afterwards the whites, which must be previously whipped to a froth. Drop it by spoonfuls into boiling hot lard, and fry to a light brown. Serve hot, powdered over with white sugar.

Apple Fritters.—I. *Take:*–Flour, 10 oz; milk, 3 gills; eggs, 2; sour apples, chopped fine, or sliced thin, 2.

Beat the yolks very light; mix in the milk and flour; whisk the whites to a stiff froth and stir them in very gently; add the apple and drop the batter by the spoonful in hot lard an inch and a half deep.

II. Make a batter same as in first recipe. Peel the apples; slice them across into rounds, from which remove the cores; dip these slices into the batter, and fry them to a light brown and until tender. Pile them regularly on the dish and dust with white sugar before serving. Some steep the sliced apples in brandy before dipping them into the batter.

Bread Fritters.—*Take:*–Bread-crumbs, 1 pt; Zante currants, ½ lb; milk, 1 pt; butter, 1 tablespoonful; powdered white sugar, ¼ lb; eggs, 6; brandy, 2 tablespoonfuls.

Grate some bread into a dish until you have a pint of crumbs; pour over these a pint of boiling milk, in which a tablespoonful of butter has been melted; cover the pan, and *let it stand an hour.* Then beat the mixture up well, flavor with nutmeg, and add a quarter of a pound of powdered white sugar, stirred in gradually, and two tablespoonfuls of brandy; beat six eggs till very light, and stir them by degrees into the mixture; lastly, add the currants (washed, dried, and dredged well with flour), a few at a time, and beat the whole together very hard. It should be a thick batter; if it turns out too thin add a little flour. Have ready over the fire a frying-pan with boiling lard; put in the batter in large spoonfuls (be careful not to let them run into each other) and fry to a light brown. Drain them on a perforated skimmer, or an inverted sieve, and send them to table hot. Serve with wine and powdered sugar.

Fruit Fritters.—*Take:*–Flour, 1½ pts; milk, 1 gill; cream, 1 pt (or a pint of milk with a

teaspoonful of melted butter in it); eggs, 6; salt, 2 teaspoonfuls.

Mix these ingredients together; add either blackberries, currants, gooseberries, or raspberries; and fry in small cakes to a light brown. Eat with a sauce made of butter, beaten up with sugar, and flavored with wine, or nutmeg, or grated lemon-peel.

Indian Meal Fritters.—*Take:*—Eggs, 4; milk, 1 pt; yellow corn meal, 1 pt; flour, 2 gills; salt, 1 even teaspoonful.

Beat the yolks of the eggs until very light; add the milk, meal, flour and salt; beat hard, then whisk the whites to a stiff froth and mix them very gently with the batter; drop by the spoonful in hot lard an inch and a half deep. As fast as the fritters are done, take them out with a perforated skimmer, through the holes of which let the lard drip back into the pot. Send them to table hot, and eat them with wine and sugar, or with molasses.

Lobster Fritters.—Cut the meat of a boiled lobster in small, neat dice; have ½ pint of stiffly reduced allemande sauce, add the lobster, season with cayenne, mace, salt, and white pepper; form in the shape of corks, dip in batter, and fry to a fine brown in plenty of lard.

Mincemeat Fritters.—Mincemeat, ½ lb; bread-crumbs, 2 oz. (or flour, 1 tablespoonful); eggs, 2; juice of ½ lemon.

Mix the above ingredients together well and drop the mixture by dessertspoonfuls into boiling lard; fry them seven or eight minutes, drain them on a napkin or white blotting paper, and send them to table very hot. These are very nice.

Pear and Peach Fritters.—Pears, peaches, oranges, or apricots, can be made into fritters in the same way as apples.

Potato Fritters.—*Take:*—White potatoes, 2 (14 oz); eggs, 4; cream, 1 tablespoonful; sweet wine, 1 tablespoonful; lemon and nutmeg.

Boil two large potatoes, and mash them well; beat four yolks and three whites of eggs, and stir them in; add the cream, wine, a squeeze of lemon juice, and a little nutmeg. *Beat this batter half an hour at least.* It will be extremely light. Have plenty of boiling lard, drop a spoonful of the batter at a time into it, and fry to a light brown. Serve with a sauce composed of a wineglassful of white wine, the juice of a lemon, one dessertspoonful of peach-leaf or almond water, and some white sugar, warmed together. Or make a sauce of butter and sugar beaten together and flavored with wine.

Rice Fritters.—*Take:*—Rice and milk.

Steep a quarter of a pound of boiled rice in half a pint of milk, make it into thin cakes, and fry them in butter to a light brown. Serve with sweet or wine sauce, made as above.

Spanish Fritters.—Cut a French roll into lengths, as thick as the finger, in any approved shape. Soak in a batter made of two tablespoonfuls of cream and one tablespoonful of sugar, flavored with nutmeg and pounded cinnamon, and beaten up with an egg. When well soaked, fry to a light brown, and serve with a sauce made of butter and sugar flavored with wine.

Venetian Fritters.—*Take:*—Whole rice, 4 oz; milk, 1 pt; sugar, 2 oz; butter, 1 oz; grated rind of ½ a lemon; currants, 3 oz; minced apples, 4 oz; flour, 1 teaspoonful; eggs, 3; salt.

Wash and drain three ounces of whole rice, put it into a pint of cold milk, and bring it very slowly to the boiling-point; stir it often, and let it simmer gently until it is quite thick and dry. When nearly done, add to it two ounces of pounded sugar, and one of fresh butter, a pinch of salt, and the grated rind of half a small lemon. Let it cool in the sauce-pan, and when only just warm, mix with it thoroughly three ounces of currants, four of apples chopped fine, a teaspoonful of flour, and three well-beaten eggs. Drop the mixture in small fritters, fry them from five to seven minutes, and let them become quite firm on one side before they are turned. Drain them as they are taken up, and sift white sugar over them after they are dished.

FROG.—The frog, which is so frequently eaten in France and many parts of the Continent, is not our common frog, but another species somewhat larger, the *Rana esculenta.* It is of a green color, spotted with black, and having two pale yellow lines down the back. It is the hind quarters only that are eaten, and these are more fleshy than the thigh of our common frog, resembling the most delicate chicken. The loins and fore-legs are used in soup. This frog is rare in this country, and the only edible frogs are the bullfrogs in their several varieties, of which the "Gibbon's green frog" is the best. They are sold in our markets by some of the fishermen, ready skinned, at so much per piece or dozen, according to the size. They are very delicate, and sweet to the taste; and those who try them seldom hesitate to eat them again.

Fried Frog.—Skin well; cut off the hind legs and throw them into boiling water, with a little salt, for five minutes; take out and lay them in cold water to cool, then drain. Have hot fat in a frying-pan on the fire; and fry them to a light, crisp brown.

Fricasseed Frog.—Cut off and skin the hind legs, and, giving them a turn or two in a sauce-pan of boiling water, throw them into cold water, and put them into a sauce-pan with button mushrooms, a bunch of parsley, garlic, one cloves, and a bit of butter. Add a pinch of flour, and moisten with a glass of white wine and a little broth. Throw in some pepper and salt, and cook them until they are tender. Take them out; boil down the sauce to a smaller quantity; thicken it with yolks of egg, and a bit of butter; throw in some chopped and scalded parsley, and pour it over the legs in their dish.

Stewed Frog.—Prepare and dress hind legs same as stewed chicken. (*See* CHICKEN.)

FROST-BITES.—These result from exposure to cold and especially to a cold wind, and affect only the extremities, and projecting parts of the body, as hands, feet, nose and ears. They are caused by the cold arresting the circulation of the blood in the exposed parts, and are frequently so rapid and so free from pain that a person is not aware of anything wrong.

Treatment.—Keep the person away from the heat, if he is allowed to come near a fire or into a warm room it will burst the local blood vessels, causing dreadful suffering and troublesome wounds. Rub the part well with snow; and if snow cannot be had, get the coldest water. Let the patient rub himself if possible, for the exertion will stimulate the circulation of the blood and help him to keep warm. Continue this rubbing for several hours if necessary, till the parts are quite soft, and something like the natural color is restored. Even when this point has been reached, friction with flannels, continued for some time, will be of great advantage. After this has been done, the parts may be anointed with sweet oil, or lard, or lime-water and oil (equal parts), and wrapped up well with flannel. If there should be any sores, dress them the same as burns.

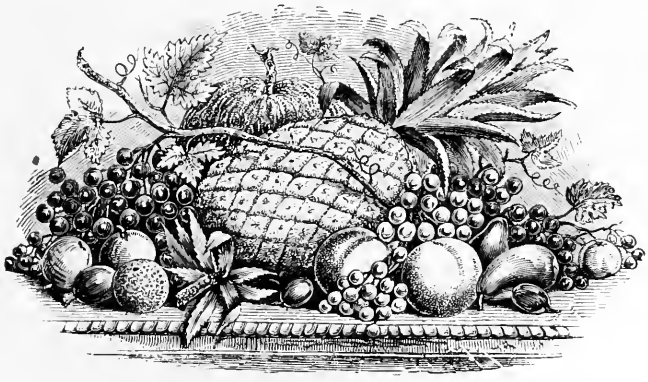
FROST FISH. (*See* TOM-COD).

FROZEN LIMBS, ETC.—Whether the whole body or a part only is affected by cold, the method of treatment is the same. Avoid a sudden change of temperature. If a person be found quite benumbed with cold, if he is taken direct to a fire, his life will probably be destroyed; a barn, or shed, a room which feels very cold to you, is warm enough at first. Remove the clothes if wet, and rub the body dry. Wrap him in blankets, and give a little warm wine and water, or weak spirits and water or tea. After a while, remove him to a warm room, but still not near a fire, and so gradually increase the warmth. Rubbing the skin is the most important restorative agent; proceed as for FROST-BITES. If the vital functions are suspended, artificial respiration may be set up according to the directions given in article on DROWNED.

Whenever a person is exposed to intensely cold weather without being able to reach a place of shelter, he should *the moment he finds his strength failing*, look out for a snow drift, sheltered from the wind by a hill or some other object, and at once scrape out a hole in it large enough for the body, and then crawl into it. The snow will shelter him from the cold and wind, and keep him warm. Human beings and sheep have lain for days this way and been saved, and generally it is the only chance.

Nipped.—This is another effect of cold, and is generally caused by standing or walking against a very cold wind. Persons suffering from it are seized suddenly with severe pain in the bowels and drawn together with cramps; the hands are swollen, and the head aches violently. The treatment should be similar to that already described: a warm room or fire must be avoided at first, and warmth gradually restored. Any kind of warm stimulating drinks may be taken in small quantities at short intervals, and after warmth is somewhat restored, warm flannels should be applied to the parts which are most painful.

FRUITS.—This very large class of vegetable products comprises representatives from every hot and temperate climate, and offers the greatest variety of flavors, and those of the most agreeable character, of all vegetable and animal foods. The true position of fruits as food is less that of nutrients than of agreeable luxuries. Their qualities, however, place them in the first rank of subsidiary, or luxurious



foods, since they supply an agreeable and refreshing material when taken alone or with other foods, which in health is desirable, and in disease almost necessary to life. They will be taken by the sick when nothing else is desired and by acting upon the sense of taste may ultimately induce the invalid to eat food of a more nutritive character. The albuminous fruits, such as cocoa-nuts, filberts, almonds, hickory nuts, and the like, are, as Dr. Smith

says, really seeds, and contain a large proportion of nutritive matter. The different varieties of fruit are treated of in their proper places in various parts of the work.

All fruits designed for immediate eating should be gathered before ten o'clock in the morning during summer, in order to obtain their best flavor. To store fruit, gather it in the middle of a dry day, being very careful not to bruise or injure it in any way. As to time, the safest rule is to observe when the fruit begins to fall naturally; unripe fruit never keeps so well as that which is *nearly ripe*—it is more apt to shrivel and lose flavor. A moist, but not damp, atmosphere is best for keeping fruits; and as many persons have cellars who have not fruit-rooms, they should store their fruit in a corner of the cellar in preference to dry closets in higher parts of the house. Again, fruit keeps better and longer in the dark than when exposed to the light. (*See* CANDYING FRUIT, and CANNING FRUIT.)

FRUIT (Wax, to make).—The first process is forming the mould from which the cast of fruit is to be taken. This is done by mixing plaster of Paris with water, to the consistency of thick paint. As the mould of fruit cannot be taken whole, it is necessary to prepare it for the parts required. For an apple, orange, or pear, two parts will be sufficient; but in other cases, when the fruit abounds in irregularities, it is requisite to take the mould in three or more parts, otherwise it will be difficult to remove.

In preparing an apple, etc., it is necessary to oil the surface of one half of the fruit, which, having done, place over it the plaster of Paris; as it sets, or dries, which it will do very quickly, smooth the edges to the exact half, with a knife, making at the same time several notches in the edge, in order that the two parts, when taken, may fit closely; when the plaster is sufficiently hardened, oil the edge with a camel-hair pencil, and prepare for taking the mould of the second half, which is performed in the same manner; the two halves, placed together, will form a perfect mould, the plaster being readily removed by means of oiling.

The next process is taking the cast; the parts of the mould will be rendered more hard by immersion in cold water; all the parts must now be bound together with string. Prepare the wax by melting it to the consistency of cream, pour it into the mould at the aperture caused by the stalk, which must be increased should the orifice be not sufficiently capacious to admit the wax; when the wax is thoroughly hardened, the string must be removed, and the pieces of the mould taken from the fruit; a perfect cast of the fruit is thus produced. The colors used are to be obtained in powder, and delicately put on the wax by means of the finger, the lighter parts being touched with a camels-hair pencil.

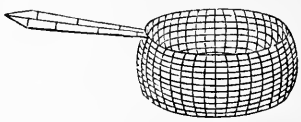
With some descriptions of fruit, as an orange, grapes, etc., the color may be put in the wax and the bloom produced afterwards by the use of the powder. The stalks are formed and inserted at the top of the fruit. The leaves are produced by thin sheets of wax, punched out to the size required, with punches prepared for the purpose; these can be obtained at most hardware stores.

FRUMETY.—Roast a quarter of a pint of wheat till it is done; then boil it in water for three or four hours; pour off the water, and add one quart of milk, two spoonfuls of flour, two eggs, half a teacupful of raisins and currants, a little lemon-peel and cinnamon. Boil a quarter of an hour and serve.

FRYING.—Considered generally to be the most unhealthful mode of cooking practiced; although if carefully performed there seems no reason why an article which is fried may not be as nutritious as an article which is baked, and just as conducive to general health. While of course it is not wise to supply a quantity of fried dishes, it is not wise to supply, without change, dishes which are boiled or roasted.

Wire Lining for Frying-pan.

Frying, as usually performed in American kitchens, is unhealthful because performed unskillfully. Considering the frequent slice of bread-crumbed fish, reeking with black grease, it is no wonder that frying is so generally condemned.



Wire Basket for Frying.

The proper mode of cooking is to entirely *immerse* the article to be fried in *smoking* hot fat—either clarified beef drippings, lard, or oil; on no account use butter, as cooking butter produces some change (probably chemical) that makes it one of the most indigestible substances known. The moment the article to be cooked touches fat sufficiently hot, its surface becomes coagulated, making it impossible for the fat to get in or the natural juices to get out. It is well to protect some articles in frying by placing them on wire supports.

English Frying-pan.

Have, on a sharp fire, a deep frying-pan more than half filled with beef drippings. Your article for frying is crumbed and ready to cook; now if, on looking across the pan, you see a thin, bluish smoke rising, lay in the article

and keep the pan gently moving, so that the contents do not stick to the sides. Turn the article once or twice, and when of a fine buff color, take it out ; lay it for a moment on clean, brown paper to absorb the fat ; garnish and serve sufficiently hot.

Sauté Pan.

Sautéeing is an entirely different process, in that only enough fat or butter is used to prevent the article cooked from sticking to the sautoir, while it is browned quickly over a very hot fire. Then enough gravy is added (if the dish is not bread-crumbed) for the sauce. Permit it to simmer a moment or two, and then instantly serve.

FUCHSIA.—Fuchsias are among the most desirable of plants, either for outdoor or indoor culture. They are extremely easy to grow ; they bear a profusion of flowers, and both flowers and foliage are very beautiful. In the garden, a moist, shady position is the most suitable ; the noonday sun scorches the tender buds and causes them to fall. Fuchsias are gross feeders and luxuriate in the richest soil. A rich loam, well mixed with leaf mould and rotted cow manure, should be provided for them ; and twice a week during the summer they should have liquid manure, either from the barn-yard, or by dissolving one tablespoonful of guano in a gallon of warm water. Water twice a day in dry weather with tepid water. Treated thus, some kinds will send out shoots from four to five feet in length in six or eight months.

Fuchsias may be grown either from seeds or cuttings, but the former method is dubious and troublesome and it is best either to buy the plants of the florist or to raise from cuttings. Take the cuttings either in February, March, or April, from three to four inches long. Plant them in clear sand, keep "sopping wet," and in three weeks they will be well rooted ; put in three inch pots, in the richest of soil, with a little sand to keep it mellow ; let them grow until the pot is well filled with roots, which will be in three or four weeks ; then re-pot in six or eight-inch pots, if designed to grow in them ; but if raised to bed out, plant at the start in five-inch pots, and when all fear of frost is passed, plant in the garden. Fuchsias show to great advantage when trained as standards ; to do this the side shoots of a young plant must be nipped off, and the stem trained up a straight stick. When it has grown as high as desired, let the side shoots branch out, and a handsome bush will be produced. They can also be trained to walls, or planted in masses in beds. If the young plant does not branch out, pinch off the terminal shoot ; side branches will soon appear, and the most central can then be trained up for a stem.

During the winter the plants can be kept in frost-proof, dry cellars, either in pots or boxes ; or they can be pulled up by the roots, the soil shaken from them, and packed in layers in sand which is thoroughly dry, first cutting off all the tender shoots. In March or April, bring them to the light and plant in rich soil, pruning not only the top but the roots ; in cutting the tops back, have an eye to shape. Plant out as soon as all danger from frost is over.

The varieties of fuchsias are innumerable, and we can only give lists of a few of the most desirable of the single and double flowering kinds.

Single Fuchsias.—These are all choice :—*Annie*, tube and sepals white, corolla deep pink ; *Arabella*, white sepals, pink corolla ; *Charming*, violet corolla, crimson sepals ; *Fairest of the Fair*, white tube and sepals, violet-rose corolla ; *Father Ignatius*, carmine sepals, blue corolla, bell shaped ; *Jules Calot*, orange-red sepals, orange-crimson corolla ; *Land of Plenty*, red sepals, violet-black corolla ; *Lustre*, vermilion corolla ; waxy-white sepals ; *Marginata*, white sepals, rose-pink corolla ; *Prince Imperial*, scarlet sepals, violet corolla ; *Rose of Castile*, white sepals, violet corolla ; *Souvenir de Cheswick* rosy-crimson sepals, violet corolla ; *Striped Unique*, purple corolla striped with white ; *Taglioni*, white reflexed sepals, dark violet corolla ; *Wane of Life*, violet-blue corolla, scarlet sepals, gold tinted foliage ; *Weeping Beauty*, scarlet sepals, blue corolla .

Double Fuchsias.—These are unsurpassed for beauty and elegance by any plant in the floral kingdom. *E. G. Henderson*, scarlet sepals, violet corolla ; *Elm City ; Emperor*, crimson sepals, white corolla ; *Grand Duke*, crimson, violet-purple corolla ; *Monstrosa*, bright rose sepals, white corolla ; *Nonpareil*, two corallas, purplish-blue ; *Norfolk Giant*, crimson sepals, violet corolla ; *Picturata*, scarlet sepals, double white corolla ; *Snowdrop*, scarlet sepals, semi-dark white corolla ; *Surpasse V. de Peubla ;* scarlet sepals, double white corolla ; *Symbol*, crimson tube and sepals, creamy-white corolla ; *Tower of London*, scarlet sepals, violet-blue corolla ; *Wilhelm Pfitzer*, rosy-carmine sepals, lavender-blue corolla.

Golden Leaved Fuchsias.—The varieties of these are few in number, and the best are :—*Cloth of Gold*, *Crown of Jewels*, *Golden Fleece*, *Golden mantle*, *Golden Treasure*, and *Orange Boven*.

Winter Flowering Fuchsias.—These bloom from December to May. There are only two varieties : *Speciosa*, tubes and flowers of a peach-blossom color, crimson corolla ; and *Serratifolia*. The flowers of the latter are distinct from those of any other kind of fuchsia. The tube is crimson, the tips of the sepals shading to green, with white stamens.

FUEL. (*See* COAL, COKE, and WOOD).

FULLER'S EARTH.—A substance useful for removing grease from floors, carpets, clothing, or greasy vessels of any kind. It is of a grayish-brown color, hard, compact, and rough, but scrapes with a polished surface. It is always scraped to a powder before using, and

applied in that form. When it becomes saturated with the grease, it must be removed and a fresh supply put on.

FUMIGATION.—The slow burning of brown paper or cotton rags is the most familiar way of destroying bad smells by fumigation. Sugar or coffee sprinkled thickly in a shovelful of live coals, and left to smoulder slowly, is also very effective and not disagreeable. A pleasant fumigation can be made by dipping cartridge paper in alum and water, drying it, and spreading one side with a mixture of equal parts of gum benzoin, olibanum, and Peruvian balsam; melt these together and spread them upon the paper with a hot knife. In using, hold slips of the paper over a candle or lamp, to evaporate the odorous matter, but not to ignite it. Ships and rooms infected with contagious diseases are fumigated with burning sulphur. The roll sulphur is placed in an iron pan or open kettle, and is ignited by pouring a little alcohol upon it, to serve as a kindler. (*See* DEODORIZERS and DISINFECTANTS.)

FUNNEL.—Funnels are made of tin, tinned iron, pewter, white or brown stone-ware, and glass, and of various sizes. Very small ones are useful for filling vials and small bottles where it is difficult to avoid spilling. Where acids are to be poured, glass or earthenware is requisite, as metal will be corroded by it. Glass is best under all circumstances, because one can see whether it is perfectly clean. A serviceable funnel can be made at any time by folding a piece of clean letter-paper into the proper shape.

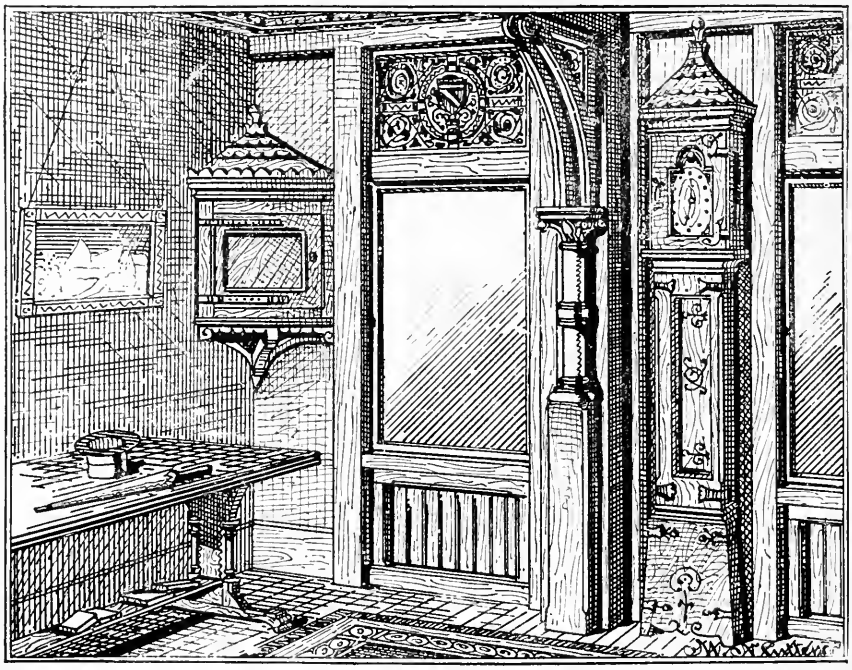


Fig. 1.—A Corner of the Hall.

FURNACE.—(*See* WARMING.)

FURNISHING.—The reader, if impecunious, need not be discouraged by the discussion here of points involving considerable outlay, for in addition to these, the article contains much for his special benefit. He is earnestly recommended to study the article on DECORATION. In it he will find an authoritative exposition of those elementary principles of taste which underlie all the decorative arts, and he will need little more in the way of suggestion concerning furniture in its artistic aspects. The present article deals with the practical aspects, including *cost*. Unfortunately, prices have been fluctuating so much in recent years that estimates are inevitably misleading. Ways of getting over this difficulty will be treated farther on.

In addition to this article, the reader will also find it desirable to consult the articles on CARPETS, CURTAINS, EARTHENWARE, PAPER-HANGING, etc., the present article being mainly confined to the consideration of what, for want of a more definite term, we may call *movable* furniture.

Since *Harper's* and *Scribner's* magazines and the Centennial Exposition have been doing so much to show people what good furniture is, it seems almost superfluous to give even the few illustrations we have space for; but this

work may find its way into the hands of some who have not enjoyed those opportunities, and

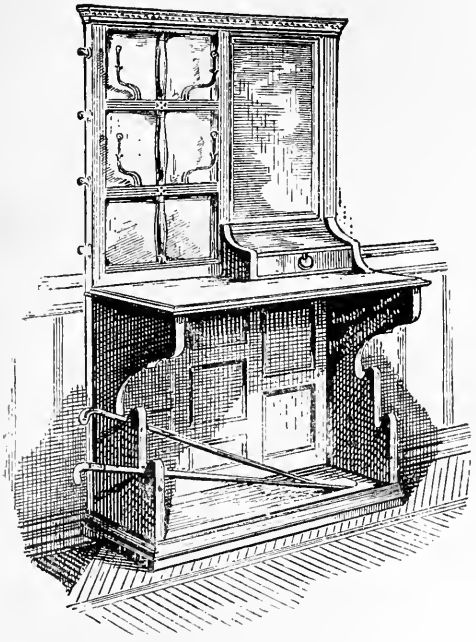


Fig. 2.

will naturally be kept by many after the disappearance of their unbound magazines and catalogues brought from the Centennial; we, therefore, insert a few illustrations. The reader will find a few others containing good ideas on furnishing, in the article on HOUSE.

Of the illustrations in this article, Figs. 5, 6, 7, 11, 16, and 21 are from the catalogue of Messrs. Cox, of London; Figs. 1, 8, 9, 12, 13, 14, and 17 are from the catalogue of Messrs. J. & R. Lamb, of New York; Figs. 18 and 19 are from the catalogue of Messrs. Horton & Ramus, of New York; the others were prepared for the work; Figs. 2, 3, 4, 15, and 22 by Mr. Babb, and Figs. 10 and 20 by Mr. M. N. Cutter.

Now for a few specific considerations, mainly with reference to getting the best effect for the least money.

The hall determines the first impression on entering the house, and it is well worth while to economize elsewhere for the sake of effect here. Probably the worst possible step is to buy the stereotyped hat and umbrella rack. No matter how elaborate, they are always the same thing over again, and generally very ugly. If, however, one is needed, some simple arrangement like that in Fig. 2, honestly made of good wood, with "dead" finish, will probably give more satisfaction, in the long run, than the more elaborate designs in which the cabinet-makers delight. A mirror, large or small, of some original shape, framed in some durable way, with pegs for the hats and coats, can be made very effective. Under it, may stand a chair or table, either having a drawer. Or a table alone will do; for hats and coats can be kept on plain hooks back under the stairs. Sticks or umbrellas can be disposed of in a cheap stand behind the door. If the hall be rather dark, a white cast or bust at the end will be very effective. A pair of horns, or several pair, can never be amiss, nor can any other decoration suggesting out of doors and the storied halls of the olden time.

Where there is room for them, one should try to have the broad table, the clock, and the little cupboard for brushes, gloves, and other things that one needs on going out and coming in, as shown in Fig. 1. This "little cupboard," by the way, can, in a small hall, easily be substituted by drawers under chairs.

A hall should look as large as it can be made to.

Stair rods seem a ridiculous superfluity for poor folks. Let the stair carpet be long enough to shift as often as it wears out on the edges of the steps.

The Parlor is usually the most Philistine of all Philistine American institutions. Where there is the usual ill-spent wealth, the room is filled with gorgeous upholstery in the cabinet-maker's style of art, has the horrible "cabinet rich and stylish," which usually figures on the furniture man's bills for enough to buy two respectable paintings, is either utterly innocent of all works of art but a few china or parian

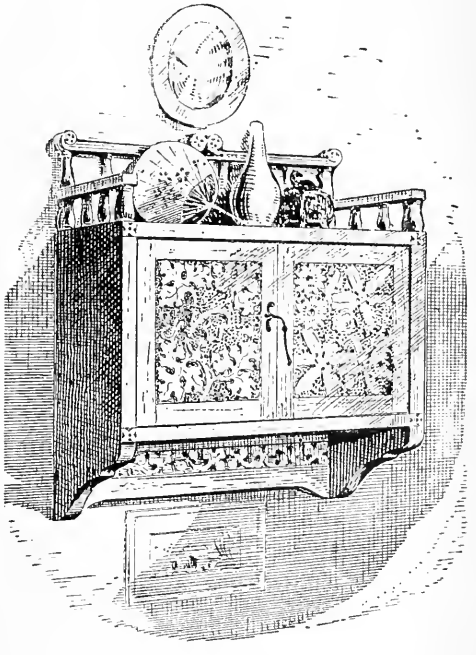


Fig. 3.

dolls and a French clock of a pattern turned out by the dozen, or has the walls covered

with paintings which are simply good canvas spoiled. If such parlors were furnished in honest pine, and one-tenth of the saving devoted to a few good engravings on the walls, their refinement would be vastly increased. There is no need of extremes, however, for the money usually spent would give honest hard wood furniture, luxuriously fashioned and cushioned, covered with good worsted reps or satines, and good photographs, engravings, or even, in many cases, paintings by deserving artists.

In the few well-furnished parlors that we have, the most frequent lack is the suggestion of ease. There is generally too much wood shown in chairs and sofas, and too little cushion. Fig. 4 suggests a good style. Ladies are

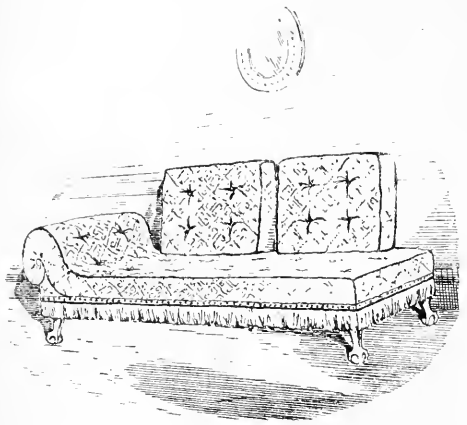


Fig. 4.

always complaining that sofa seats are too broad. Hence the advantage of cushions that can be piled against each other, or laid against the back of a deep easy chair.

If the reader will carefully consider what Mr. Babb has to say about chairs in the article on Decoration, he may care to see a good chair or two in Figs. 10 and 14, and in front in Fig. 20.

A good table is not yet an easy thing to find. There's not much to be said against Fig. 5, except that it's a pity that woodcuts won't show color. A fitly colored jar, contrasted with the

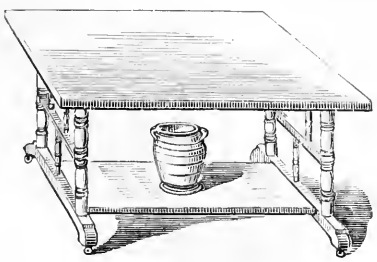


Fig. 5.

wood, in such a position, is always very agreeable.

There seems, in most parlors, too much re-

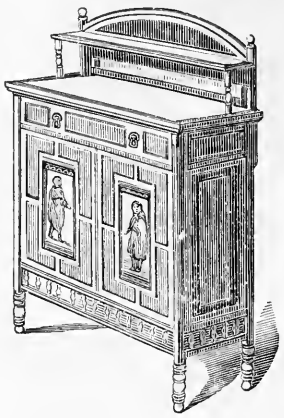


Fig. 6.

luctance to have anything around to indicate that the room is used.

Fig. 7.

The parlor should suggest festivity rather than meditation. If colors be well chosen,

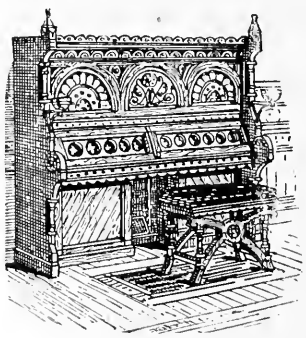


Fig. 8.

Brussels carpet and worsted reps will produce really as good effect as richer materials; though,

on account of the danger from moths, woolen upholstery and Brussels carpets are less economical for people upon whom the first outlay does not bear too heavily than silk fabrics and the higher grades of carpet.

Most parlors are oblong, with two windows at one end. The spot between them is the point in the whole room for effect: all living things turn toward the light. People of taste, if they have plenty of money for more important things, sometimes put mirrors in this spot: Philistines always do. Something bright and effective should go there always. There are worse things for the purpose than a light cabinet (if it is tasteful, which not one in a hundred is), laden with good bric-à-brac. Fig. 6 or 7 would do. A massive or dark-colored cabinet, unless the color of the wall is warm, would be too sombre. Such an one as Fig. 9 requires space, for more reasons than one. (The chair in the same figure would have to be redrawn before it could be recommended.) Whatever is done, don't let the piano stand in front of this spot and obliterate it—especially as pianos are all so ugly. Fig. 8 suggests

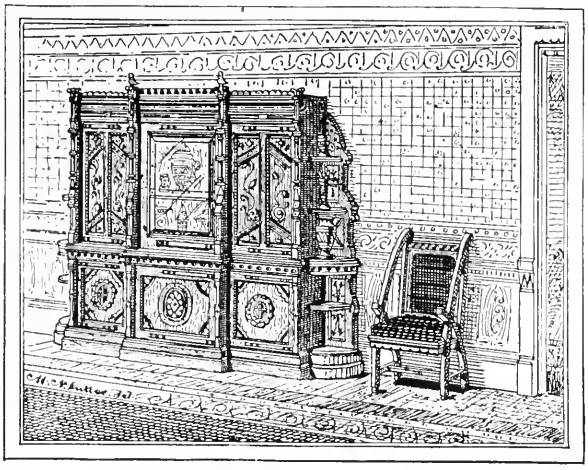


Fig. 9.

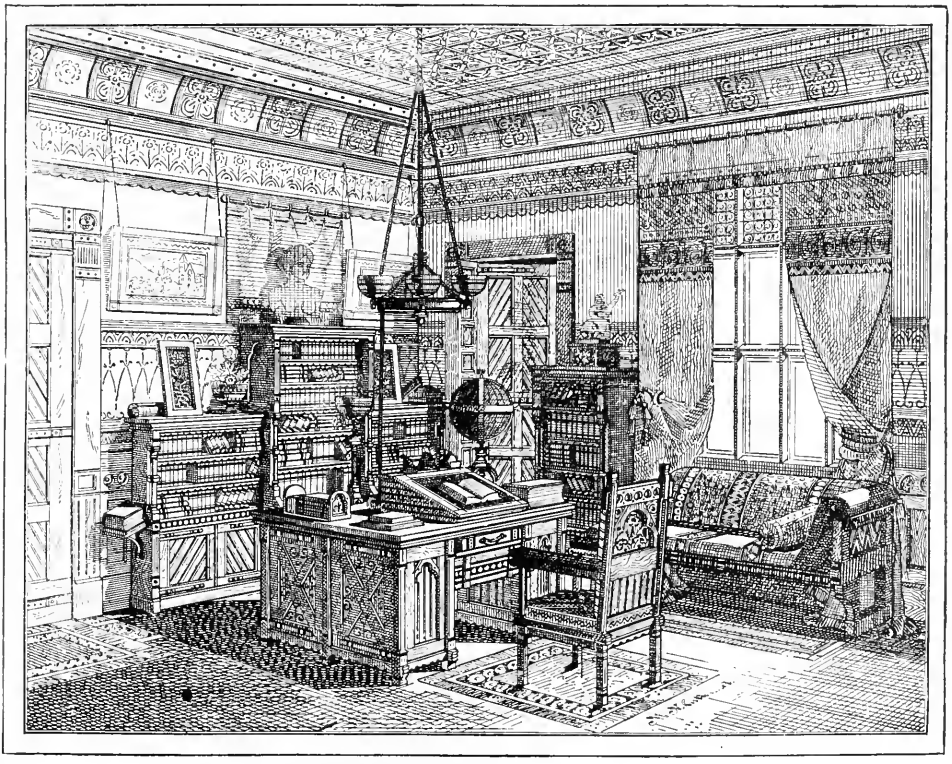


Fig. 10.

an improved style of upright piano—an instrument that there is some excuse for in a crowded city house.

Can anybody tell why marble is a fit material to cover any piece of furniture but a steam-heater or a washstand?

The Library. The main economical question is doors or no doors to the bookcases.

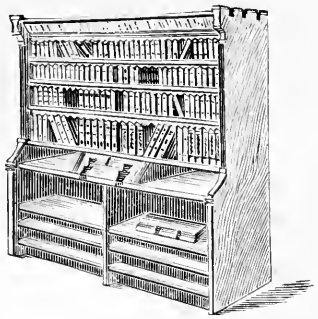


Fig. 11.

Doors nearly double the cost, and the books will do very well without them, especially if a strip of leather depend over their tops from the shelf above. "Pinked" edges on this strip will curl up, but gilt lines have a pleasant effect. Library furniture is best covered in leather—green or dark-brown. Here one comes to read, and the eye should not be wooed from its work by any dashes of importunate color.

The wooden mantel with shelves rising above it is justly growing in favor. Fig. 12 shows an inexpensive arrangement, giving something of the same effect. The fireplace is tiled.

This room generally contains the gentleman's desk. Fig. 13 combines beauty and utility for either the business-man or the scholar.

The Dining-room. Probably there is no better test of the refinement of a family than the relation of its dining-room to the rest of the house. If the family meal is regarded as a mere feeding, the place where it is taken

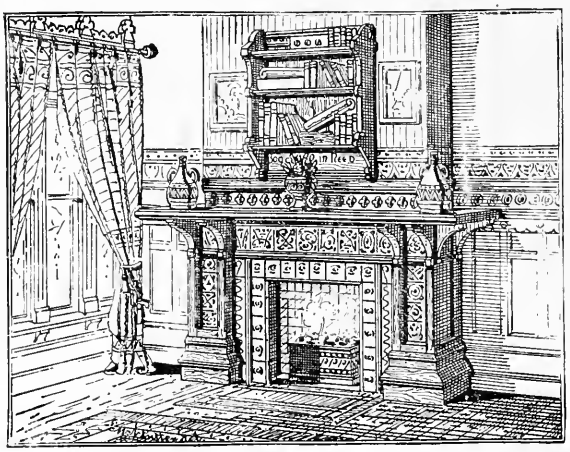


Fig. 12.

will plainly show the fact. If the meal be a cheerful household ceremony, where the best qualities of head and heart engage, and to which the most honored friends are gathered,

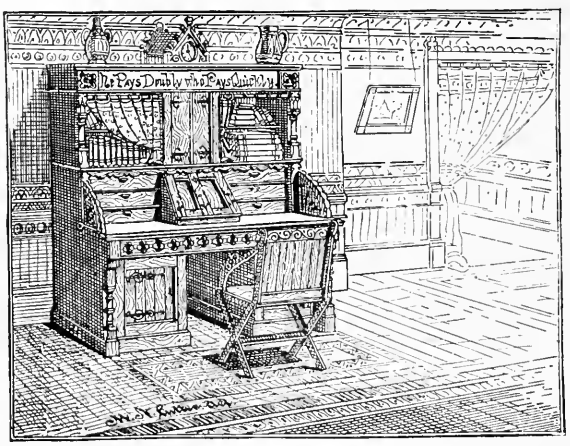


Fig. 13.

these facts, too, will be indicated by the room. The piece of furniture that makes or mars the dining-room is the sideboard, or buffet, as we seem to be in the way of calling it now.

With a good substantial table and chairs (the latter cushioned if it can possibly be afforded), any amount of effect can be added to the buffet without its appearing to overshadow the rest,

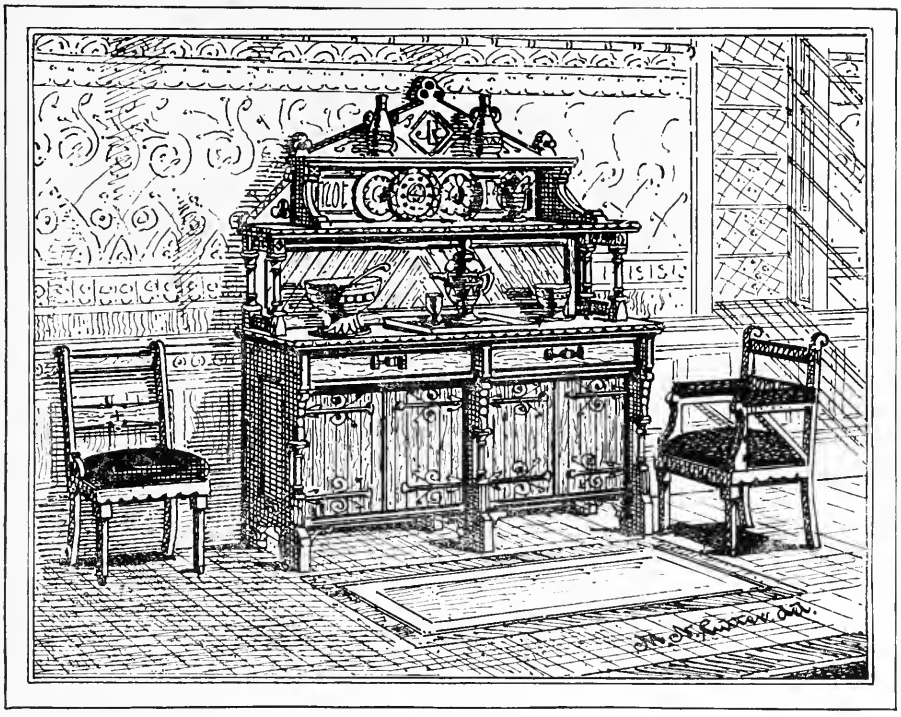


Fig. 14.

and every feature will tell. If you cannot have as elaborate a one as Fig. 14, you will not be

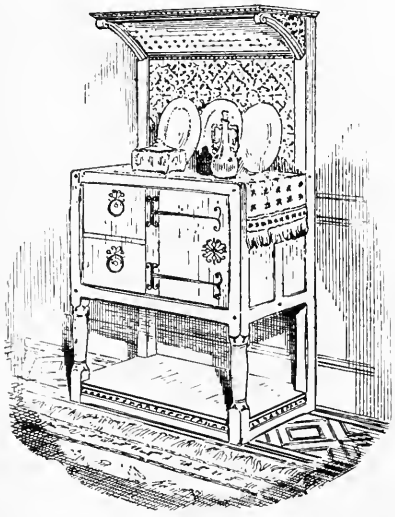


Fig. 15.

in bad taste with Fig. 15. When people are at table, they see neither the table nor the chairs, but they do see the buffet. If you can cover it with ancestral plate, very good; but if you cannot, it may, perhaps, be made to look as well with bright china, glass, Japanese lac-

Fig. 16.

quer-work, and flowers (never artificial ones). Don't have a marble top, it will "chip" glass articles with angular bottoms. Many a fine piece has been thus gradually spoiled, and the

cause not realized. A "dinner wagon," as shown in Fig. 16, is vastly more useful than a side-table.

Bedrooms. As far as decorative effect goes, the thing of least importance in a bedroom is the bed. Generally, the more the cabinet-

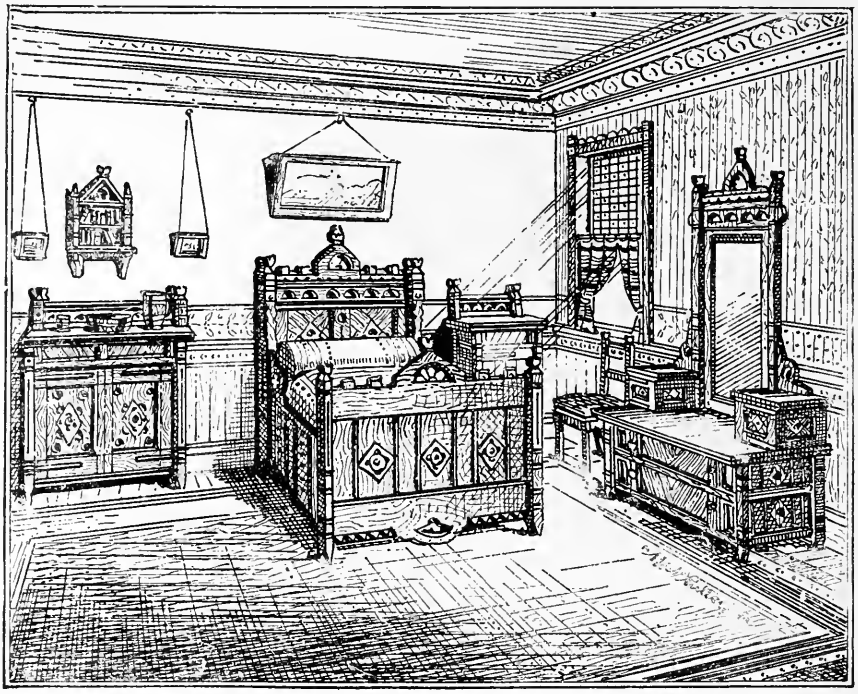


Fig. 17.

maker does to it, the uglier he gets it, and even if he gets it pretty, those who lie upon it do not see it, and when not lying upon it, their attention is more apt to be directed to another article, which is the real center of bedroom

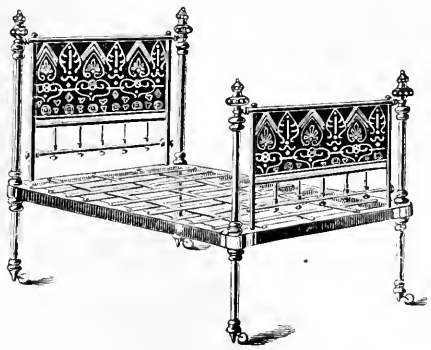


Fig. 18.—Brass Bedstead.

effect, namely, the dressing-bureau. This generally stands in the same important spot—between the windows—that has been enlarged upon in treating of the parlor. Hence, if you are not rich, get a plain bedstead and spend your spare money on the bureau. Don't overlook brass bedsteads. It is to be hoped that

Fig. 19.—Brass Bedstead.

they will soon be cheaper than at this writing. Nothing need be better. In New York there

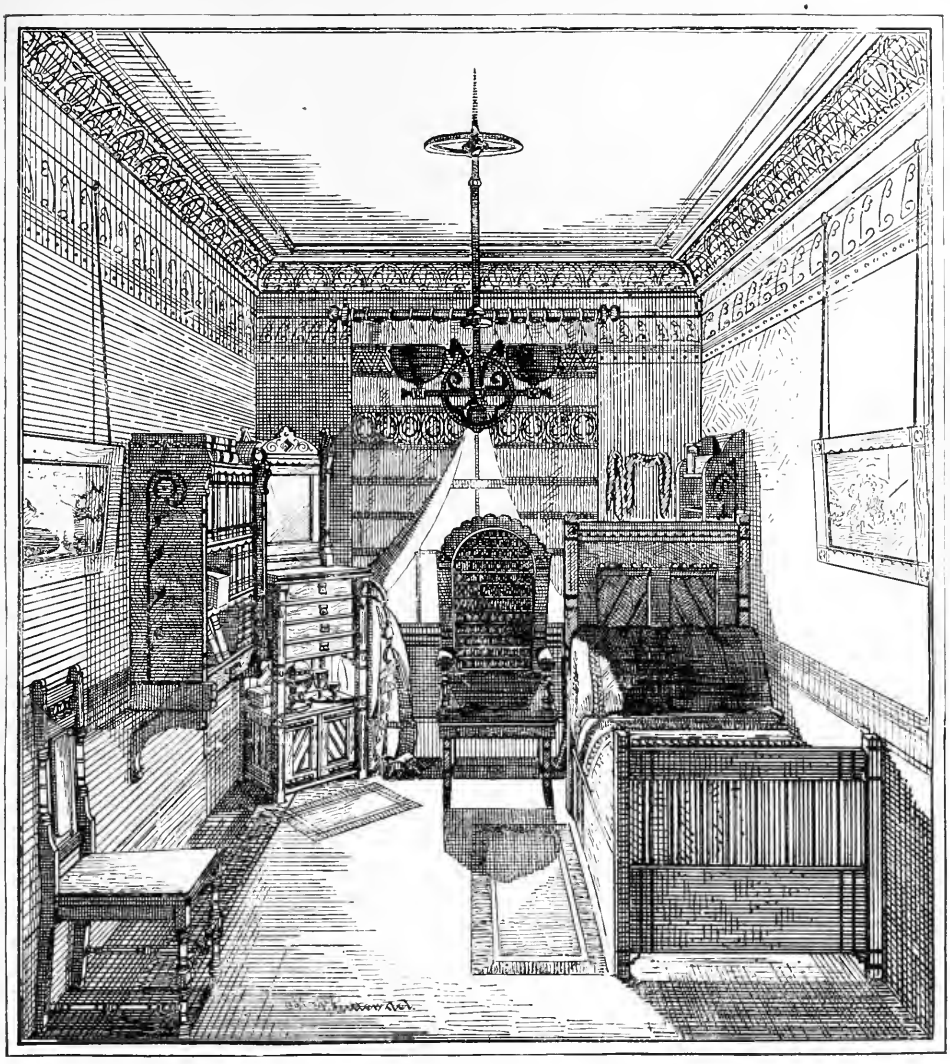


Fig. 20.—Bachelor Quarters—7 x 9.

is made of any of the ordinary hard woods (though, of course, generally to be found only in walnut), a good, neat, strong bedstead, against which nothing can be said, for $28.00. It is not out of place with a bureau, in the massive style, worth $280.00. Fig. 22 cost but $45.00, made to order, in the time of high prices.

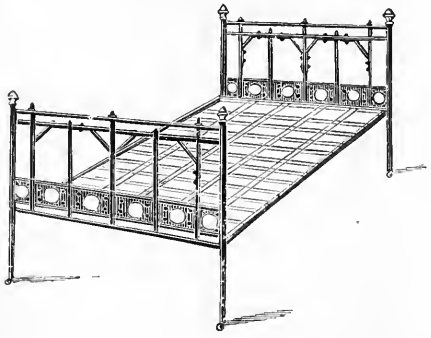


Fig. 21.—Brass Bedstead.

Marble tops on bureaus always crack things, and are unpleasant to the touch except in summer.

Nursery.—Don't have a carpet. It always will smell. Lay the floor in hard wood if you can possibly afford it; the cheaper wood carpeting can be made to do. In the middle of the room have a woolen drugget, fastened at the corners by movable nails, so it can be taken up and shaken daily, and washed often.

Don't have curtains to the windows. The children while awake need every ray of light they can get. Have thick, dark-green shades,

though, to shut out all light while they are napping. A low table, six or eight feet long by two wide, is a grand thing for a nursery. The children will handle many toys on it instead of cultivating round shoulders on the floor. Let its legs fold against it so that it can be laid against the wall when room for romping is needed. The height of your chair-seats regulates the distance your children shall tumble from.

Servants' Rooms.—Iron bedsteads are the thing. They are durable and do not make good nests for bugs. Bureau washstands economize space. The room is not to be occupied much; it ought to be comfortable though, and decent enough to attract servants who are decent. Bright, broad coloring in the carpet will do much to obviate a cheerless look.

The Kitchen.—(*See* lists farther on, and separate article on KITCHEN.)

Gas Fixtures do more to make or mar a room than almost anything else. We do not mean that the chandelier should be so gaudy as to be the only thing visible in the room, but that it should cost enough to be *good*. This is too often lost sight of, and some people even econ-

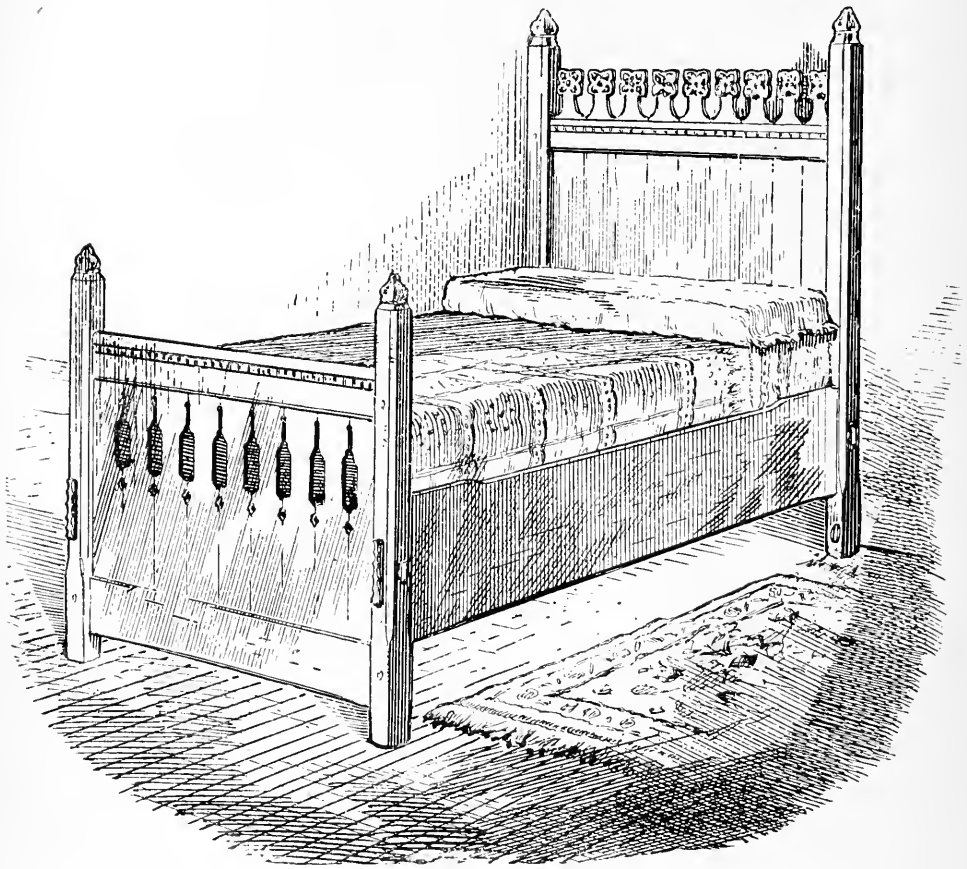


Fig. 22.

omize on the gas fixtures which never wear out, rather than on the carpets and upholstery, which do. Most people do worse, however, by buying abominable angular *cast* metal concerns, or those with *curved* glass tubes which threaten breakage if you look at them. The basis of most good metal chandeliers is wrought tubing, and of most good glass or earthenware ones, vases or plates around or through which the gas is conveyed in metal tubes. A room in Brussels and worsted reps with a good chandelier will have treble the effect of a room in moquette and brocatelle with a poor chandelier.

Common gas fixtures can be refinished for about one-third of their cost, and changed from gilt to bronze, or steel, or oxydized silver, if desirable. The better ones of honest brass, are generally covered with lacquer, and need relacquering not oftener than once in ten or twelve years.

Curtains do not need to be of material as durable as chair covering. If you can make colors correspond, a vastly inferior grade will do.

Woods.—An account of the qualities of the different woods may be of use to the purchaser.

Ash is rather lighter colored than oak, but is sometimes used in connection with it. It is less likely to split.

Beech, a very close and tough wood, is chiefly used for the framework of chairs, tables, and bedsteads. It is nearly of the color of birch, but rather paler, and it may be known by the presence of those peculiar little specks of darker brown, which are easily seen in a carpenter's plane.

Birch is very close-grained, strong, and easily worked. It is of a pale yellowish brown. If polished or varnished, it somewhat resembles satinwood, but is darker, and by staining is capable of being made to closely resemble Honduras mahogany. It is used in the better kinds of low-priced furniture.

Cedar somewhat resembles mahogany, though more purplish. It has no "curl," and is free from tendency to warp or "cast." The best varieties have a peculiarly pleasant aroma, which is offensive to moths; hence it is highly valued for making drawers and chests for clothing.

Chestnut is coarse-grained, strong, elastic, light, and very durable. Some of the best of the cheaper furniture is made of it. It looks so much like white oak as to be frequently used in combination with it.

Ebony is of a deep black color, and highly prized for several purposes, particularly inlaying. It is exceedingly hard, heavy, and durable, but expensive. Pear and other woods dyed black are often substituted for it; but are not so susceptible of good polish and luster, or so permanent in color. The best comes from Africa; a kind variegated with brown is brought from Mauritius and Ceylon.

Mahogany is imported of two kinds—Honduras and Spanish. The former has a coarse, loose, and straight grain, without much curl or wave. The latter is darker, with curl, by which in great measure its price is regulated, and with a very fine, close texture. Spanish mahogany will bear great violence; it is also free from any tendency to warp. When, however, it is very much curled, it is not nearly so strong or so free from twist; but this is of little consequence, as its value is so great that it is generally veneered on to some less valuable wood, as Honduras or cedar. The heaviest mahogany is generally the best.

Maple is of several qualities, the bird's-eye maple being most highly valued. It somewhat resembles satinwood, but is more buff than yellow, has more curl, and more "bird's-eye." Maple is light and not very durable, and is used only in the cheaper kinds of furniture.

Oak.—There are several varieties, of which the *white oak*, the *red oak*, and the *live oak* are the most important. The first is most used. Oak takes long to season, and is worse than most woods if used green. It is very hard to work. Its appearance improves with age. On account of its tendency to warp, a great deal of so-called oak work is panelled with chestnut.

Pearwood is of a light yellow color, and on account of its even grain, a favorite wood for carving. It is often stained to imitate ebony.

Pine is used in two varieties, the white and the yellow. When thoroughly dry, these woods are very free from all tendency to warp or shrink; but in a half-seasoned state articles made of them fall to pieces. They are readily distinguished from one another by the difference of color, and from deals by the absence of turpentine veins. When oiled and varnished, both kinds of pine look very well. It seems a sin to stain it.

Ratan, from strips of which the seats of cane chairs are made, is a small sort of cane, brought from China, Japan, and Sumatra. A very pretty and durable style of summer-chairs, lounges, tables, baskets, etc., is now made wholly of ratan.

Rosewood is hard and dark, with some little curl, intermediate in this respect between Spanish and Honduras mahogany, and of a very open grain. Most articles of rosewood furniture are veneered, but the best are of solid wood. The color, which consists of large elongated dark zones on a reddish-brown ground, is permanent, unless it be much exposed to the direct rays of the sun; and it takes a fine polish, which is improved by slight waxing, or, better, by the French polish, which brings out the color of the wood admirably.

Satinwood is now used chiefly for inlaying, lining, and veneers. It is of a full yellowish color, with a fine grain, little curl, and a silky luster. Its toughness fits it well for furniture.

Walnut is a native wood, but is used in such prodigious quantity that it is also imported. Well seasoned it is exceedingly tough and little inclined to warp.

(*See* LACQUERING and VARNISHING.)

Selection of Furniture.—Points of taste in the selection of furniture have been treated in the article on DECORATION (which the reader intending to furnish is advised to *study*), and, incidentally, earlier in this article. Here we shall only attempt a few purely practical considerations. Too much deference is generally paid to the fashion of the day, which entirely changes before the articles are worn out, while things good in themselves are never out of fashion. For those who can afford it, expensive and highly ornamented furniture is a legitimate luxury; but it should be borne in mind that this outlay is not only a present increase of cost, but that in all future additions the same style must be carried out, or the whole will partake of a piecemeal character, and look much worse to a tasteful eye than if none of the articles were elaborate.

Often in cheap showy furniture, hastily flung together by inferior manufacturers, the cost of repairs amounts to the difference between the price

paid and that of really good furniture. It is far better for the young housekeeper to make up his mind what he can afford to expend, and then go to some firm well-known as makers of good articles and deal with them as far as it will go. The lists given in the latter part of this article will serve as a guide to some extent in this respect, but of course they may be varied to suit the particular tastes or circumstances of each individual case.

A mistaken prejudice against the style of furniture known as "cottage," often adds materially to the cost necessarily involved in furnishing a house, for all the hard woods are expensive. This prejudice was perhaps excusable when the "cottage furniture" first became fashionable, for it was too often poorly finished, rough in design, and tawdry in coloring; but now it is well made, and more artistically painted. It is prettier and more desirable than the pine furniture stained in imitation of the costly woods. It can be bought, or painted to order in any color that may be preferred; but the light stone colors, and soft browns will furnish a room in better taste than the yellows, blues, and greens that have been the rule until recently. A "cottage" bedroom set, with marble-top washstand can be had for about one half the price of a plain hardwood set. But in the name of all honesty, do not buy a "Cottage set" that is painted in poor imitation of something more expensive like oak or walnut. It is to be hoped that dealers will soon be content to offer honest pine without paint, but properly polished to display its own merits.

Second-Hand Furniture.—There is a radical difference of opinion among housekeepers as to the advisableness of buying furniture at second-hand, as it is called. On the one hand it cannot be denied that second-hand furniture can generally be bought for little more than half the price of the new; but it is urged on the other hand that every "bargain" is counter-balanced by two or three "sells," and that the temptation to buy things merely because they are going cheap, almost always leads to a larger expenditure than was contemplated. The truth is that the purchasing of such furniture is a matter which calls in an eminent degree for good judgment, and plenty of time, and as time is money, it is doubtful whether money had not better be spent on new furniture than time on second hand. Beds, bedding, carpets, oil-cloths, and upholstered furniture should never be bought at second-hand, either at an auction or from a regular dealer. All articles made of wood, should be carefully examined as to their condition, particularly as to whether they are made of unseasoned wood, which in second-hand furniture is very easily detected. Surfaces out of level, open joints, rickety legs, and cracks in the wood, are plainly to be seen if present, and indicate either bad workmanship or bad materials, or both. Window-curtains and mirrors can be bought at second-hand very cheaply, if the purchaser can content himself with such as are not of the newest pattern and style. It is a serious question, though, when economy is an object, whether such vanities had not better be dispensed with in favor of engravings, busts, or other works of art. Glass, crockery, and cutlery may also be bought very cheap; but kitchen utensils had much better be procured new, as it is difficult to estimate exactly the amount of wear they have been subjected to. Some of the more expensive articles, however, such as meat-screens, fish-kettles, etc., may be bought with advantage if in good condition.

It is best in purchasing furniture at auction to examine it carefully before the sale commences, and mark on the catalogue such articles as are wanted, with the outside prices you are willing to give; having done so, never go above the prices thus fixed upon. Inflexible adherence to this rule is the first condition of safe buying; for one is very apt to be carried away by the competition of bids, and nearly every auctioneer has a set of dummies in the audience who are quick to discover who will let goods be run up on them. At the same time he who makes up his mind to buy nothing but "great bargains" at auction will generally find his time wasted. Second-hand furniture has a value nearly as uniform and stable as the new; and "bargains" are to be looked upon with suspicion.

Price-Lists of Furniture.—The most practical assistance, perhaps, is lists of the articles needed and their prices. We have prepared three, based on actual houses, designed to meet the wants of several classes of purchasers expending from say eight hundred to five thousand dollars. It is not supposed, of course, that these lists will be followed literally. Each individual housekeeper will have his own tastes and means to consult; between the limits the lists furnish all the materials necessary for making a choice. Those who go beyond five thousand dollars, although they will be governed mainly by their own taste, may yet find some useful suggestions in the lists. At this time, however, we all labor under one great difficulty. All prices are now (1877) in chaos. Those prevailing at the times when these houses were furnished are all changed; and if we were to now ascertain the prices of the same dealers, they would probably be changed before the reader sees the book. The only way for the reader to use the lists is to assume that the prices are from twenty to forty per cent. too high; and, if he wishes more detailed accuracy, to learn the present prices of several articles and strike an average.

LIST No. 1.

A modest establishment, consisting of Hall 6 x 18, with stairs, Parlor 15 x 18, Dining-room 15 x 18, Bedroom 15 x 18, Nursery 15 x 18, Hall-

Bedroom 6 x 10, Servant's Room 6 x 10, Kitchen and Laundry together, all neatly and durably furnished before the recent revolution in prices for about $1,000, would cost in 1877 probably $800.

HALL 6 x 18 INCLUDING STAIRWAY.

20 yards American body Brussels, made and laid with lining	$2.00* per yard	$40.00	Hat-rack and Umbrella-stand 10.00
			Total $50,00

PARLOR AND SITTING-ROOM COMBINED, 15 x 18.

All the furniture in Walnut, Oak, or other plain hard wood.

2 Scotch Holland Window Shades with tassels and patent rollers		$ 4.40	2 Oriental folding chairs, in worsted reps to match, at $10,00 20.00
14 yards Nottingham Lace, two windows		21.00	Rocker to match, seat in reps 14.00
2 Window-cornices, gilt, lacquer, or wood to match furniture		4.00	2 small chairs, cane or straw seats 8.00
40 yards American Body Brussels carpeting, made and laid with lining at $2.00 per yard		80.00	Centre table with rep cover to match furniture† 16.00
Lounge, in worsted reps		25.00	Stand of shelves, with drawer, for books, etc. 12.00
			Total $204 40

DINING-ROOM, 15 x 18.

Furnished in Hardwood, had better contrast with that of Parlor.

2 Window Shades		4.40	1 doz. Plated Dessert Spoons 9.00
Curtains as in Parlor, with cornices in gilt, lacquer, or wood like furniture		25.00	1 doz. Plated Tea Spoons 5.50
40 yards American Body Brussels Carpeting to match parlor, made and laid with lining, at $2.00 per yard		80.00	A Plated Dinner Castor 8.90
Extension Table for 12 persons		14.00	1 doz. Ivory-handled Knives 6.60
6 Chairs		15.00	Carver and Steel 3.50
Sideboard		40.00	Bronze Call Bell .75
Small Tray for waiter		.75	Plain white French China Dinner Set, suitable for all meals 30.00
Britannia Coffee Pot		2.75	1 doz. Goblets, cut glass 4.00
1 doz. Plated Table Forks		10.00	" Tumblers for servant's use, etc 1.00
1 doz. Plated Dessert Forks		9.00	2 Preserve Dishes, cut glass, and of different sizes 3.00
1 doz. Plated Table Spoons		10.00	China Fruit Basket 1.50
			Water Pitcher .75
			Molasses Jug .75
			1 doz. Glass Salt Cellars .75
			Total $286.90

Table Linen and Towels.

12 yards Linen Damask for 3 table-cloths		12.00	6 Towels for servant's room 1.00
Material for 2 kitchen table-cloths		1.50	8 Towels for glass and china 1.50
3 doz. Plain Napkins		4.00	8 Coarser Dish Towels. 1.00
3 doz. Towels		10.00	
			Total $31.00

UPPER HALL. 3 x 12.

4 yards carpet as in bedrooms at $1.50, $6.00

PRINCIPAL BEDROOM, 15 x 18.

2 Window-shades		3.80	2 Feather Pillows, 4 lbs. each 8.00
14 yards Chintz for curtains for two windows		3.50	Feather Bolster, 6 lbs 6.00
2 Window-cornices lacquered		2.50	1 pair Blankets 10.00
30 yards American Ingrain carpeting, made and laid with lining, at $1.50 per yard		45.00	2 Marseilles Spreads 8.00
			3 pairs Cotton Sheets, 9 4 wide 8.25
			3 pairs Cotton Pillow-cases, 5-4 wide 3.60

* The carpets on each floor of a small house had better match throughout. It looks better than a patchwork of small carpets, giving breadth of effect, and is much more economical for making over. A few cents less than $2 per yard will supply this, but even figures are taken to facilitate calculation.

† It is a good plan to have the gimp and buttons on the furniture of so modest a room as this, from a different color from the reps. Then a band of the relieving color on the table cover gives much effect.

PRINCIPAL BEDROOM, 15 x 18.—*Continued.*

Suite of Cottage Furniture, with marble-top wash-stand		50 00	3 Cotton Bolster-cases 1.56
Springs for Bedsteads		5.00	China Toilet Set 5.00
Hair Mattress, 40 lbs		28.00	Total $188.21

HALL BEDROOM, 6 x 12.

8 yards American Ingrain carpet, as on rest of floor		12.00	3 pairs Cotton Sheets, 6-4 wide 3.40
Window Shade		1.90	3 pair Pillow-cases, 5-4 wide 3.60
Cornice		1.25	1 pair Blankets 5.00
7 yards Chintz for Curtain, at 40 cts		2.80	Coverlid 2.50
Iron Bedstead		4.00	Bureau Washstand. 5.00
Straw Mattress		1.25	Chair 2.00
Hair Mattress		12.00	Toilet set 4.00
2 Feather Pillows, 4 lbs. each		8.00	Looking-glass 1.50
			Total $70.20

NURSERY.

No carpet, drugget for middle of floor		5.00	Bureau Washstand 5.00
2 thick green Window Shades		5.00	Toilet set 4.00
Crib and Bedding		20.00	Looking-glass 2.00
Attendant's Iron Bed and Bedding as in hall bedroom		39.75	2 Shaker Chairs, straight 3.00
			2 Shaker Chairs, (rocker) 5.00
			Total $88.75

SERVANT'S BEDROOM, 6 x 10.

1 Window Shade and Trimmings		1.00	Colored Cotton Bedspread 1.75
15 yards Rag Carpeting		15.00	Feather Pillow, 3 lbs 3.00
Looking-glass		1.00	3 pairs Cotton Sheets, 6-4 wide 3.39
Bureau Washstand		5.00	3 Pillow-cases 1.20
Chair		.75	Toilet set 2.50
Single Iron Bedstead		4.00	Total $53.34
Straw Mattress		1.25	
Hair top Mattress		8.00	
1 pair Blankets		5.50	

KITCHEN AND LAUNDRY TOGETHER.

Barrel Cover		.50	Knife, for Cook .50
Basket, for Clothes		1.00	Ladle, tin .30
Basket, for Market		1.00	Lemon Squeezer .30
Bench, for Washing		1.50	2 match Safes .30
Boiler, for Clothes		6.00	1 Pail (Japaned) for Water 1.25
Boiler, Oval		2.00	2 Pails, wooden .60
Boxes, nest of		1.00	Pan, for Baking .50
2 Brooms		.70	Pan, for Washing .35
Cake Pan		.35	1 doz. Patty Pans .75
Cannister		.45	6 Pie Plates .60
2 Chairs, plain		1.50	Pint Measure .25
1 " Shaker Rocker		1.50	Poker .25
Chopping Bowl		.25	Potato Masher .15
Chopping Knife		1.00	Refrigerator 20.00
Cleaver		1.75	Rolling-pin .25
Clock		2.50	3 pairs Sad Irons 5.00
Clothes Horse		2.00	Sauce Pan (enameled) .75
Coffee Mill		1.50	Scoop .25
6 doz Clothes Pins		.70	Scrubbing Brush .25
Coffee Pot, Britannia		1.75	Shovel .50
Cork Screw		.50	Sieve .50
Cullender		.75	Skewers (set of) 1.00
Dipper, tin		.20	Skimmer .30
Duster, for Paint		.50	Skirt Board 2.00
Dust Pan		.35	Slop Pail, with cover 1.25
Dredger, for Pepper		.15	2 Soap Cups .20
Feather Duster		1.00	Spoon, for Basting .30
6 Forks, table		1.50	6 Spoons (britannia) tea. 1.25
Fork, large, for cooking Meat		.40	2 Stands, for Irons .30
Frying Pan		1.00	Step Ladder 2.50
Funnel		.15	Table, small 2.50
Grater		.15	Table, large with drawer 4.50
Griddle		.90	Tea Drawer .75
Gridiron		1.75	Towel Roller .50
Ice Pick		.25	2 Tubs 4.50
Jelly Mould		.50	Total $97.95
Kettle, for Range		2.25	
6 Knives		1.25	

SUMMARY LIST NO. 1.

Hall and Stairway		$ 50.00	Nursery 88.75
Parlor		204.40	Servant's Room 53.34
Dining Room		286.90	Kitchen and Laundry. 97.95
Upper Hall		6.00	Total. $1045.75
Large Bedroom		188.21	
Hall Bedroom		70.20	

This list makes no provision for cooking, heating, and light-

ing, most modern houses, no matter how modest, being provided with ranges and fireplaces, and many with gas-fixtures. If it is necessary to provide these and keep within limits, the carpeting of the first floor will have to be reduced to Ingrain, this will take a quarter less yards (as it is wider by one-quarter than the Brussells), and a quarter less price per yard. The estimate gives for parlor, dining-room, and stairs, an aggregate of 100 yards, at $2.00 per yard, total, $200.00. The same space can be covered by 75 yards of American Ingrain at $1.50. Total, $112.50. Leaving $87.50 for other purposes. But in any room that is used, it is really cheaper, if the money is available, to pay $200.00 for good body Brussels than any less sum for any lower grade of carpet.

LIST No. 2.

A small, English basement house, 16.8x50, in a fashionable locality, where the usual expense for furnishing a similar establishment would be $4,000 to $5,000. This list follows quite closely one that was very pleasantly furnished (including gas-fixtures) for about $2,500, and a considerable amount in addition was invested in works of art. This house was furnished prior to the recent revolution in prices. Prices are now (1877) twenty to thirty per cent. lower. List omits shades and curtains.

☞Through this list let it be understood, without repetition in each instance, that prices of carpets include making, laying, and lining.

HALL AND STAIRWAY.

Furnished in Oak.

Carpet, as in list No. 1.	$40 00	Bronze statuette on newel post for gas-light, with globe	54 00
Table with marble slab, and umbrella stand at each end, (second hand)	10 00	Outside mat with lock and chain	5 00
2 pair deer's horns mount'd on oak shields for hat and coat racks.	20 00	2 rugs at $3	6 00
Oblong mirror framed in oak	25 00	Total	$160 00

RECEPTION ROOM.

Furnished in Oak.

Which was used by the gentleman as a snuggery for study, writing, etc.

22½ yds. Brussels carpet at $2	$45 00	Mantel-board covered in rep with fringe (covering done at home,) gilt nails	8 00
Library Desk	38 00	Gilt Chandelier, 3 lights with globes	15 00
Book-case with closet underneath	12 00	Rug	4 00
Lounge, green worsted rep	25 00	Total	$163 50
2 Cane-seat Chairs at $2 75	5 50		
Shaker rocking chair covered in reps with fringe: covering done at home	11 00		

BACK ROOM ON FIRST FLOOR.

Was used as an ironing room; the room above it being used for dining, the dumb-waiter being carried up an extra story. Articles used will be included under KITCHEN.

PARLOR.

Furnished in Walnut and Worsted Reps.

150 yds. Brussels carpet —for whole floor, including parlor, large middle hall and stair-way, and dining-room at $2	$300 00	2 Dwarf Book-Cases at $37 50	75 00
Divan Sofa	75 00	Centre Table, covered with Billiard-Cloth to match reps—a unique piece bought at second hand	24 00
2 small chairs cushioned seat and back	22 00	Rug	10 00
Arm-Chair upholstered throughout	30 00	Chandelier, 6 lights with globes	54 00
Oriental Folding Chair	11 00	Total	$636 00
Rocker	35 00		

HALL, PARLOR FLOOR.

Contained a statue in a niche, two of the dining chairs generally stood in this hall. The carpet is included under the parlor.

Drop-light, of classic design, with glass, cost $17 00

DINING-ROOM.

Walnut and Leather.

Carpet included under parlor.

Extension Table	$45 00	Side Table	12 00
8 Dining Chairs at $7 50	60 00	Chandelier, 3 lights and Argand slide with globes	45 00
Sideboard, a rich and unique old piece, bought, of course at second hand, a "find."	65 00	Table linen and furniture (exclusive of silver)	150 00
Beam Rug	5 00	Total	$382 00

3RD STORY, FRONT.

Chestnut and Oak, Cretonne Curtains, Gray Rep Lounge.

26 yds. American Ingrain	$39 00	Spring Mattress	12 00
Chamber Suite, less Washstand and Table (there being marble washstand with faucets)	75 00	Best Feather Bolster and Pillows	20 00
Bed Table	18 00	Bed Linen, as in list No. 1	32 00
Lounge	20 00	2 jointed gas brackets with globes	8 00
Best Hair Mattress	30 00	Total	$254 00

3RD STORY, BACK.

Same as front, deducting Lounge $20, and bed table $18; but allowing $6 for table in suite.—Net $222.

3RD STORY, HALL AND STAIRS.

14½ yds. Brussels at $2	$29 00	Gas Bracket and Globe.	2 75
		Total	$31 75

4TH STORY, FRONT.

Same as 3d story back, deducting $35 because Cottage Suite was used. Net $187.

3RD STORY HALL.

Same as in List No. 1.	$ 6 00	Gas Bracket and Globe.	1 50
		Total	$7 50

TWO SERVANTS ROOMS.

Each same as in List No. 1, at $43.34, adding, say, one half to one of them which accommodates two persons. Total for the two $108.35.

KITCHEN, LAUNDRY, ETC.

The following are additional to List 1.

Essentials same as in List No. 1	$94 75	Carver	1 75
		Caster	1 50
		Chamois skin	50
Apple Corer	12	Champagne opener	1 75
2 Baking Dishes	40	Cracker box	40
Basket for large silver.	7 00	Cup mop	20
" small " .	3 50	Cutter for biscuit	5
" wash (add'nl to List 1)	1 50	Egg-beater	25
Board (bosom)	65	Fluting Machine	8 00
" (knife)	45	Funnel	25
4 Bowls, small	60	Grater (additional to List 1)	30
1 Bowl, large, with lip.	75	Gravy Strainer	50
Bread Knife	75	Gridiron (wire)	1 00
Brush for bottles	20	Keeler (cedar)	1 50
" furniture	60	Kettle, Copper, for preserving	4 00
" range	75	Kettle for fish	3 00
2 Brushes for scrubbing (large)	80	" starch	1 00
Brush for sink	10	Knife Tray	75
1 pr. Butter Hands	50	" Washer	1 00
Butter Ladle	20	50 yds. of Oilcloth for kitchen and basement hall, laid, at $1 35	67 50
Cake Box	1 25	Mat for door	1 25
Cake Cutter	15	Meat Saw	1 40
2 Candlesticks	40		
Can opener	50		

Mincing Knife	70
Mill for Spice	1 75
Mirror	1 00
2 Mouse-traps	40
Mop and extra handle	95
1 doz. Muffin Rings	40
Oven (English)	16 00
Pail, Tin	40
Pan, Drip	70
" Dish, additional to List 1	1 00
" Frying, additional to List 1	40
" Frying, additional to List 1	80
3 Pans for Jelly Cake	75
Pan for Laplanders	75
" Pudding	20
" Refrigerator drippings	1 00
1 doz. Patty pans for Oysters	75
Pitcher	75
2 Pots (stone)	3 00
Refrigerator (additional price to List 1)	10 00
Scales and Weights	3 25
Settee, Table ironing	7 00
Sieve (hair)	45
Soup Digester	3 50
Spice Box	1 00
Tack Hammer	50
Teapot (Britannia)	2 00
Toast Fork	15
Tray (galvanized iron)	75
Wash-board, zinc	75
Water Cooler	1 50
Watering Pot	75
Wringer	8 00
Total	$285 07

SUMMARY OF LIST NO. 2.

Hall	$160 00
Reception-room	163 50
Parlor	636 00
Parlor Hall	17 00
Dining-room	382 00
3d story front	254 00
" back	222 00
" hall	31 75
4th story front	187 00
" hall	7 50
Servants' rooms	108 35
Kitchen (unnecessarily elaborate)	285 07
Total	$2454 17

LIST No. 3.

A good-sized house, in a fashionable locality, conducted with considerable elegance. It usually costs to furnish such an establishment about $10,000: this one was furnished for about $5,000, thus leaving a handsome margin for works of art. The result attracts general approval.

HALL.

Walnut.

Floor being tiled, no carpet is needed.

Mirror shaped and framed after original designs, supplied with hooks for coats and hats	$100 00
2 Chairs with drawers under seats for brushes, gloves, &c., seats and backs in leather at $18	36 00
Plain umbrella stand (between chairs and under mirror)	6 00
Bracket for card receiver behind door	5 00
Fine Brussels stair carpet with pads—See summary at end of List	
Total	$147 00

PARLOR, 15 x 29.

Maple, Birch, Oak and Satine, with Silk and worsted Fringe.

Constructive Cabinet, elaborate metal hinges and tiles	$135 00
Divan Sofa	80 00
2 large French Arm Chairs at $50	100 00
2 Ladies' Chairs, to match at $27	54 00
4 small Chairs, upholstered, at $6.50	26 00
Mantel-board	12 00
Satine Lambrequins* with fringe, home-made, at $18 each	36 00
Plain constructive centre table, after original design, covered with Persian Rug	75 00
Brussels carpet, extra quality (border being carried around fire-place obviates necessity of rug, but is a blunder, nevertheless). See summary at end of List 3.	
2 pr. Superior Nottingham Curtains at $10.	20 00
2 Broad Lacquered Cornices at $3.50	7 00
Total	$545 00

LIBRARY, 15 x 18.

Oak and Leather.

4 Book Cases, in the constructive style, 5½ feet high, respectively 11, 6, 6 and 3 feet wide, long one being in three divisions, with centre division higher than the others. No doors. Uprights with a little intaglio carving, tops projecting, shelves with strips of leather (same as furniture) with gilt line near edge	$80 00
Constructive Library Table with elaborate metal mountings	80 00
Curtains same as parlor except lambrequins in rep, and cornices to match furniture, together	63 00
Register Guard to protect books (painted to match furniture)	3 50
Mantel-board	10 00
Carpet, Brussels, at $2.22 (see summary at end of List 3.	
Spanish Lounge	50 00
2 Rotary Arm Chairs, seats and backs cushioned, at $19	38 00
2 smaller but heavy Chairs, cushion'd seats at $9.50	19 00
1 Lady's light Shaker Rocker with tape check seat and back	6 00
1 Foot Rocker (cushioned like rest of furniture	6 50
Total	$356 00

DINING-ROOM.

Walnut and Leather—Floor Parquetted

Turkish Rug	$ 35 00
Table	60 00
8 Chairs, heavy, cushioned seats, at $9.50.	76 00
Buffet, Gothic, elaborate metal mountings.	115 00
Side Table	15 00
Small stand of shelves for glass, &c	20 00
Table Linen and furniture (exclusive of silver), say	200 00
Plate warmer	6 00
2 Walnut Cornices, with tiles inserted, at $6	14 00
Curtains same as parlor (different pattern)	56 00
Mantel-board	10 00
3 Children's Chairs at $6.50	19 50
Total	$626 50

BILLIARD-ROOM.

Oak.

Table and fixtures complete from best maker (second-hand table, but with new cloth and entirely refinished; fixtures all new, the whole bought from the Factory and not to be in any way distinguished from new	$250 00
6 Oak billiard chairs at $2.50	15 00
Cocoa matting around table, bound and laid (floor in hard-wood).	20 00
Total	$285 00

☞ Shades were bought for the light over the table, but subsequently discarded because they darkened the room and did not help the players.

BED-ROOM 1, 15 x 20.

Chestnut, Oak, and Worsted Reps with Fringe of Different Colors.

Oak Bedstead, plain and substantial	28 00
Oak and Chestnut Dressing Bureau, constructive, from original designs, with elaborate metal mountings	80 00
Bed Table	15 00
Gardner Rack for brushes, bottles, &c., in wash closet	2 50
Mug, Soap-tray and brush-tray	1 00
Mantel-board, home-made	5 50
Best Hair Mattress 45 lbs. at 80c	36 00
Best Hair Bolster, 7 lbs. at 80c	5 60
2 Feather Pillows, 4 lbs. each, at $1.10	8 80
Bed Covering, as in List No. 2	7 00
Best Spring Mattress	25 00
Lounge	30 00
2 Chairs, upholstered seats, at $5.50	11 00
1 Large Shaker Rocker.	10 00
1 Small " " tape check seat and back	6 00
2 Gilt Lacquer Cornices at $2	4 00
Curtains, French Dotted Muslin, ruffled and lined with paper muslin List 1	31 41
Carpet, Brussels, at $1.94, see summary at end of List 3.	
Total	$306 81.

NIGHT NURSERY.

Chestnut.

2 Bureaus at $25	50 00
Table	9 00
Bed for attendant, as in List 1	40 00
3 Cribs at $24	72 00
3 Sets Mattresses and bedclothes for cribs at $20	60 00
2 Substantial Shaker Rockers at $5	10 00
2 Straight Shaker Rockers at $3	6 00
Carpet, Brussels—See summary at end of List 3.	
1 Window Shade, heavy green, best fittings	5 00
Total	$252 00

DAY NURSERY.

Chestnut, and Oak Floor Parquetted.

Table (as described in general hints on nursery)	10 00
Chairs as in Night Nursery	16 00
Sewing-table	5 00
3 Low Children's Ch'irs at $2	6 00
3 Gardner Book-racks for books and toys, at $2.50	7 50
Drugget for centre of floor	5 00
Total	$ 49 50

* A bad business, see CURTAINS.

HALL BED-ROOM, 8 x 12.

Walnut.

Bedstead (three-quarter size) same quality as in Bed-room I	28 00	cushioned seat	5 50
Bedding and Covering, say 1/4 less than Bed-room I	79 77	1 Folding Easy Chair	25 00
Bureau Washstand, marble top	25 00	1 Gardner Rack for brushes, bottles &c	2 50
Curtains and Cornice, one window, same as Bedroom	25 00	Toilet Set	7 50
1 Small Walnut Chair,		Carpet, Brussels, same as Bed-room 1. See summary at end of List 3.	
		Total	$198 27

BED-ROOM II, 15 x 18.

Walnut and Worsted Reps.

Bedstead	$28 00	ed seat, at $5.50	16 50
Mattresses and bedding same as bedroom I, deducting $13 for Spring Mattress on account of less frequent use	91 36	Shaker Rocker, covered to match furniture	10 00
Bureau, Marble Top (which ought not to have been)	45 00	2 Cornices, lacquered, at $1.50	3 00
Small Table	7 50	2 Prs. Curtains, as in Bed-room 1	5 50
Lounge	20 00	Carpet, Ingrain, at $1.45 See summary at end of List 3.	
3 small Chairs, cushion-		Total	$226 86

SERVANTS ROOMS (TWO 8 x 12 AND ONE 15 x 18).

2 single rooms, same as List 1 (these rooms being larger than in List 1, the carpet will be included twice—the second time in summary at end of List 3)		at $53.34	106 68
		1 double room, at say 50 per cent. additional to above	65 00
		Total	$171 68

KITCHEN.

Same as List II.

SUMMARY OF LIST 3.

Hall	$147 00	Day Nursery	49 50
Parlor	545 00	Hall Bedroom	198 27
Library	356 00	Bedroom II	226 86
Dining-room	626 50	Servants' Rooms	171 68
Billiard-room	285 00		
Bedroom 1	307 16	Total	$3164 97
Night Nursery	252 00		

Kitchen furniture same as List II	285 07
In a matter of this amount, a dollar here and there is not worth considering, consequently it was not deemed worth while to unravel the carpet bill to get at each room. The style of each room is specified with price per yard, made and laid, with lining. The total bill was $1053 04, from this should be deducted $67 50 for kitchen and basement oilcloth, already being included under kitchen furniture, leaving net	985 54
This house was taken with the gas fixtures in. The gas fixtures in List 2 cost $202 75. Twice that amount ought to do for this house	405 50
	$4841 08

Now, as a parting hint: don't buy anything at the start that you are not sure to need. You can fill in afterwards according to both necessity and taste. To furnish in taste, especially, even where means are unlimited, requires more time and waiting for lucky chances.

FURNITURE OIL.—For mahogany and polished woods of all kinds the following is excellent:—Put into a jar one pint of linseed oil, into which stir one ounce of powdered rose-pink, and add one ounce of alkanet-root, beaten in a mortar; set the jar in a warm place for a few days, when the oil will be deeply colored, and the substances having settled, it may be poured off for use. Rub on with a woollen rag. This oil darkens mahogany or oak, and gives it that rich blackish surface common in old furniture. For unvarnished walnut kerosene oil is as good as any other after the first two or three coats, which should be of linseed oil. It dries quickly, and presents a smoother surface.

FURNITURE POLISH.—I. Take of butter of antimony, half an ounce; vinegar, one ounce; spirits of wine, one ounce; linseed oil, three-quarters of a pint to one pint. Mix and shake well together; the linseed oil should be added in sufficient quantity to make the liquid of the consistency of cream. Rub on with a flannel and plenty of friction.

II. *French polish:* Dissolve half a pound of shellac in as much wood-naphtha as will suffice to take it up and make a creamy fluid—and add to this a quarter of a pint of *spirit* copal varnish. Pour a little of this into a cup and add half as much naphtha, and apply rapidly to the surface of the wood with a bold sweep of a rubber composed of some woollen material, which must be changed as fast as it gets sticky. As soon as the first coat is thoroughly dry, which may be known by its not sticking to the finger, add another coat in the same way; but when the body of polish is sufficiently thick, mix some spirits of wine with the naphtha and bring the surface to a fine gloss, using fresh rubbers, and finishing off with the polish mixed with spirits alone, instead of naphtha.

III. Mix two parts linseed oil, two parts alcohol, one part turpentine, and spirits of ether in proportion of one ounce to one quart of the mixture. Rub on with rags. This is a good floor polish.

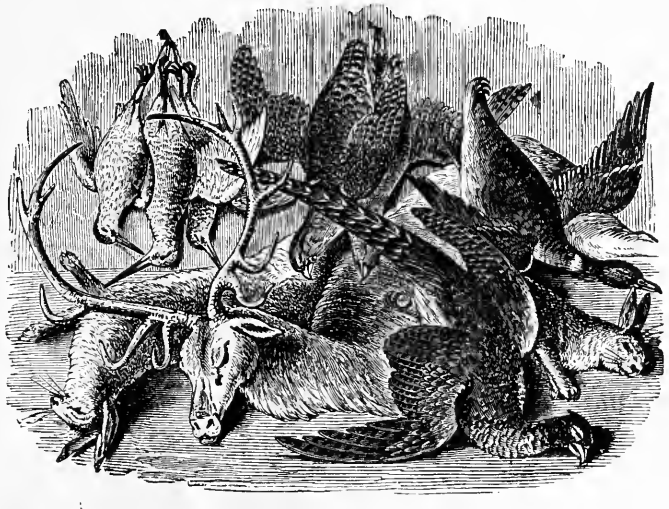
FURS.—These should be combed now and then while in use, and especially as the Spring approaches. When put away for the Summer they should be first beaten with a small cane and carefully combed through, and then sewed up in small folds of calico or calico carefully turned in at the edges. A barrel or keg in which whiskey has been kept is the most reliable place known. Keep in a dry place and examine once a month. It is a mistake to suppose that moths can be kept away by camphor, pepper, cedar-wood, and the like; these substances are distasteful to insects under ordinary conditions; but that they cannot be relied upon is proved by the fact that moths have been known to hatch in an atmosphere impregnated with camphor.

FUSTIAN.—A species of coarse cotton cloth, very similar in its manufacture to that of velvet, having in addition to the warp and woof a *pile* consisting of threads doubled together and thrown in ridges, and presenting a smooth evenly-ribbed surface on the exterior. The best descriptions of this class of goods are known as *cotton velvet*, *velveteen*, and the like. Fustian is also used as a general term comprehending a variety of cotton fabrics, as *corduroy*, *jean*, *thickset*, *moleskin*, and other stout cloths for wearing apparel. They are either plan or twilled; and are strong, durable, and cheap.

G

GAMBOGE.—A gum resin exuded by a species of tree found chiefly in Cambodia, and of a brilliant yellow color. It is used chiefly as a pigment by painters; but is sometimes prescribed medicinally. It is a very powerful cathartic, unless taken in excessive doses, when it causes vomiting and acute pain. On account of its rapid action, and producing watery evacuations, Gamboge is a drug of great importance in all cases of dropsy, apoplexy, and where a brisk effort and copious discharge from the bowels are required. It should never be taken, however, except as directd by a physician.

GAME.—Under this head are included all the edible wild animals and wild fowl. No markets in the world are so abundantly supplied with this species of food as the American, and it would take up too much space even to enumerate the various forms in which it appears. Each separate species is treated of in its proper place; and we shall here only call attention to the fact that white-meated game should be thoroughly cooked, and dark-meated eaten rare, and to the relation which Game in general bears to other foods. The point of contrast between the flesh of wild animals and that of domesticated and artificially fed ones is the greater hardness and solidity of the flesh, the greater proportion of solid fibre to the juices, the less proportion of water and fat in the juices, and the greater proportion of lean to fat. Hence it follows that under the same circumstances (say when both the wild and the tame animals have been killed within a day) the mastication of the flesh of wild animals is less easy, the flavor is more concentrated, and the proportion of flesh-forming compounds is greater. They are therefore strong foods, and if well digested, are highly nutritious. Their decided flavor is also a recommendation to invalids or others who, being satiated with ordinary food, need something to stimulate defective appetite. For



the difference between wild and domestic fowl, *see* BIRDS.

Keeping Game not only renders it more tender, but brings out its flavor. If it be wrapped in a cloth moistened with pyroligneous acid and water in equal proportions, it will keep good for many days in the hottest weather; this is better than putting it on ice. If there be any danger that the birds will not keep till a convenient time for dressing them, pick and draw them, wash them well in water, and rub them with salt; plunge them singly into a large pot of boiling water, draw them up and down by the legs, to let the water pass through them; after they have been in the water five minutes hang them up to dry in a cold place, sprinkle them with pepper, and salt well inside. By this means they may be kept a long time; before dressing them, they must be washed in clear water. When feathered game has become tainted, pick and clean the birds as soon as possible, and immerse them in new milk. Let them remain in this till next day, when they will be quite sweet and fit for cooking. Birds should be hung up by the neck, and not by the feet, notwithstanding our artist having done it.

GARDENING.—The practical directions concerning soil, drainage, etc., in the article on

FLORICULTURE, apply equally to the garden designed for vegetables, and need not be repeated here. The soil should be turned up as deep as the spade will reach as soon as the frost is out of the ground; a liberal supply of manure should be forked in at a second working; and the garden should be laid out in such a manner that every portion can be reached easily without injuring the plants when in full growth. *To plant garden seeds*, lay across the beds a board about a foot wide and with a stick, make a furrow on each side of it, one inch deep. Scatter the seeds, say a dozen to a foot, in this furrow, and cover them; then lay the board over them and step on it, to press down the earth, and to mark the next row. When the plants are an inch high, thin them out, leaving space proportioned to their sizes. Seeds of similar species, such as melons and squashes, should not be planted near together, as this causes them to degenerate by a cross-fertilization of their flowers. Neither should the same vegetables, with the exception of onions, be planted in the same place for two years in succession. The seeds of nearly all the early vegetables require to be started in a hot-bed (*see* HOT-BED). Full directions for culture are given under the name of each vegetable. (*See* FLORICULTURE.)

Garlic.

GARLIC.—A species of the onion, with a taste more acrimonious than any other, and an extremely disagreeable smell. It is a native of Sicily, but now grows throughout the world. Its culture is the same as that of the onion in all respects (*see* ONION). Garlic is extensively used as a seasoning herb on the Continent, and especially in France, where it is considered essential to many dishes. In this country it is used comparatively little, though with the introduction of foreign methods of cookery its use is spreading. The root, which is the only part of the plant made use of, consists of a group of several bulbs, called *cloves of garlic*, enclosed in a single membranous skin. These are usually found strung in ropes or bunches, like onions; and are in season throughout the year.

Vinegar (Garlic).—On two ounces of garlic, peeled and bruised, pour a quart of the best vinegar; stop the jar or bottle close, and in a fortnight or three weeks the vinegar may be strained off for use. A few drops will give a sufficient flavor to a sauce or to a tureen of gravy. The garlic may be used in smaller or larger proportions, as a slighter or stronger flavor is desired, and may remain longer in the vinegar.

GAS.—Gas is at once the cheapest and brightest of all generally employed artificial lights. Of its economy, as to the quantity of light, there can be no doubt; for when gas is used regularly and properly attended to, an ordinary burner consuming five cubic feet per hour, emits a light equal to sixteen to twenty candles. The impression that it is expensive arises from the fact that persons who have been accustomed to using one, or at most, two candles in their apartment are seldom satisfied with the same quantity of light from their gas-burner when it can be so easily made to yield more. The very excellencies of gas in this respect are turned to bad account; its high illuminating power leads to its use in excessive quantities; and nearly every room in which gas is used is lighted far more brilliantly than when any other illuminating agent is relied upon, or than is at all necessary. The evils of this do not end with the increased expensiveness. The air is heated by the excessive combustion, and poisoned by large quantities of carbonic acid which there are no means of removing. The eye is unprotected from the glare by screen or shade, extraneous light is freely admitted, which obscures the impression and strains the nerve of vision, and in proportion as the sensibility of the eye is impaired, stronger light is used, which gives temporary relief, but with danger of ultimate and permanent injury to the sight. The use of gaslight also greatly heightens the necessity for effective ventilation of the house, for it generates poison exactly in proportion to its brilliancy. On all accounts the excessively bright illumination to which the use of gas has led is to be deplored; the established rule should be that in an ordinary apartment no more than one burner should be kept lighted except under special circumstances.

The light obtained from a given quantity of gas depends largely upon the kind of burner. Various burners are now in use. They are usually designated by some term signifying the kind of opening at which the gas escapes. Thus we have the *argand* burner, with a circle of

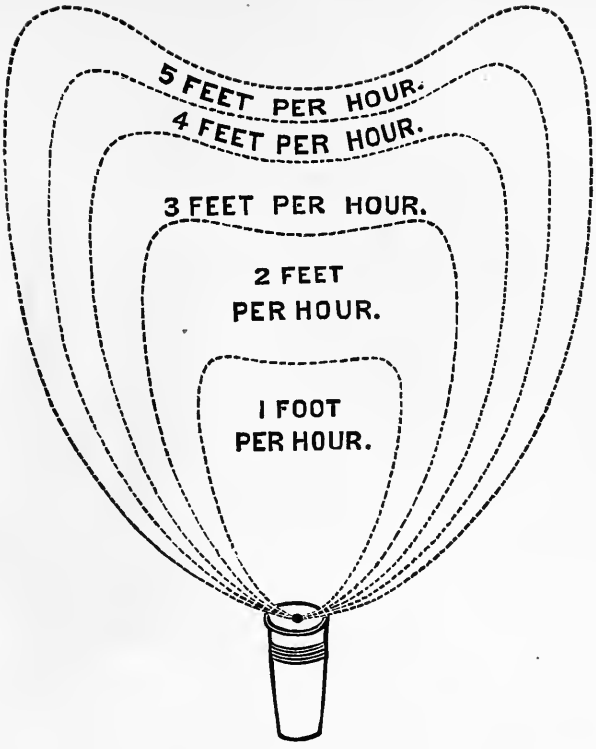
Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

holes as in Fig. 8, named from analogy with the argand lamp; the *fishtail* burner, where the gas escapes by two holes inclined toward one another (Figs. 2 and 4); the *batwing* burner, where the orifice is simply a slit (Figs. 1 and 3). The size of the orifice is adapted for different amounts of gas per hour; then we have 3-foot, 4



Rate of consumption from a 5-foot burner. It will be observed that in turning down, the illumination decreases more rapidly than the consumption.

foot, 7-foot etc., burners. The jet is either of brass or of steatite (soapstone); the latter, though the first cost is greater, are really more economical as they do not clog with rust. Many burners are what are called "check" burners; in these the gas passes through two openings, an interior and exterior one. The interior opening at the base of the burner is smaller than the visible exterior one, and as a result the gas escapes and burns at a lower pressure than could be otherwise obtained, Figs. 6 and 7 represent bases for check burners.

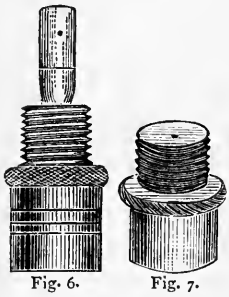


Fig. 6. Fig. 7.

Regulator burners contain a mechanical arrangement in which the flow of gas through them is regulated, in proportion to the pressure that no more than a given amout of gas may be burned in them, and the light is kept steady. Such burners are, however, liable to get out of order. A batswing, fish tail or argand jet, may be used in a check or regulator burner. The most economical burner giving the maximum of light for the amount of gas consumed is the argand burner. These, however, require a chimney which with its liability to break, and necessity for constant cleaning, is objectionable. Moreover, these burners are more susceptible to the inevitable variations in pressure of the gas reaching our dwellings. A batswing check burner is more advantageous for simplicity; but the breadth of the flame would prevent its being used when globes are employed, for the flame would come so near the glass as to endanger it. In such a case a check fishtail or argand burner

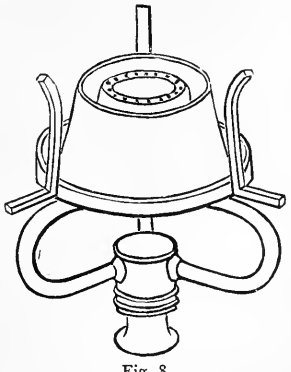


Fig. 8.

should be used. The most perfect burner yet constructed is Suggs' London burner (Fig. 8). This burner is used in the tests made upon

gas. The maximum illuminating power is obtained when the flame is just on the verge of smoking.

The loss of light by the use of shades, chimneys, etc., is very considerable and largely due to the conversion of light into heat. The following numbers, selected from the results of William King, of Liverpool, and Prof. F. H. Storer, of Boston, are a sufficient illustration :—

Description of glass	Thickness of glass.	Loss of light.
Clear glass (King)	....	10.57
Ground glass "	....	29.48
Smooth opal "	....	52.82
Ground opal "	....	55.85
Thick English plate (Storer)	1-3 inch.	6-15
Crystal plate "	1-8 "	8-61
English Crown "	1-8 "	13.08
Double English window "	1-8 "	6.39
Double German (Belgian) Storer,	1-8 "	13.00
Single German (Belgian) "	1-6 "	4.27
Double " (Belgian) ground (Storer)	1-8 "	62.34
Single " " " "	1-16 "	65.74
Berkshire, Mass. ground (Storer)	1-66 "	62.74
Orange-colored window glass (Storer)	1-16 "	34.48
Purple " " " "	1-8 "	35-11
Ruby " " " "	1-16 "	89-62
Green " " " "	1-16 "	81.97
A porcelain transparency	1.16 "	97.68

Probably many of our readers have been frequently annoyed while engaged in study, writing, or in some evening occupation, by a sudden flaring up of the gas, accompanied with a sharp hissing sound. This is caused by an unnecessary force or pressure and causes a large waste of gas. This cannot be remedied effectually by the simple change of burners, but requires a self-acting cock which will regulate the pressure and maintain an even amount of

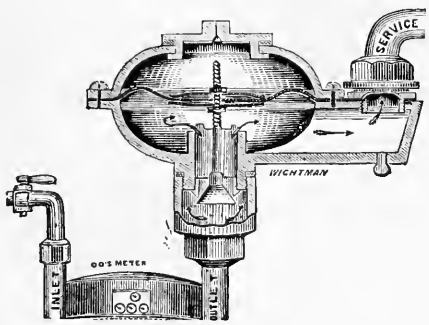


Fig. 9.

force. Frost's Gas Regulator (Fig. 9) has been practically tested by the writer in his home and has been found to distribute to each light enough gas to supply the orifice and adapt itself to all alike as they are opened or shut off.

The conical valve is connected with the diaphragm, which, when raised by pressure of the gas, raises the valve and *vice versa*. If the diaphragm is raised too easily, a slight weight can be laid upon it by taking off the top.

Every housekeeper is aware of the annoyance and danger attendant upon the use of matches, and we therefore mention in this connection a very ingenious little invention, also successfully used by the writer, known as the Stock-

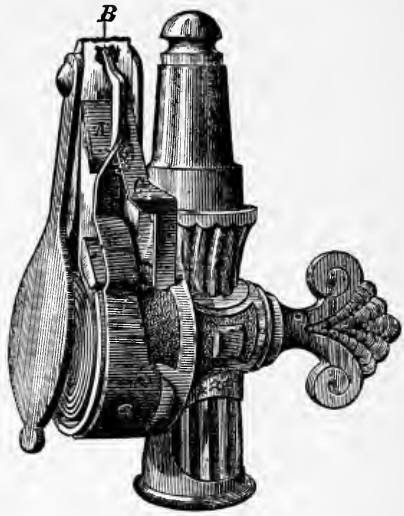


Fig. 10.

well Self-Lighting Burner. It consists of a burner to the lower part of which is attached a circular chamber provided with a swinging cover, within and fitting against the wall of this compartment is a disk rotated by the key, the projecting spindle of which holds a coil of paper, Fig. 11, containing 135 dots of fulminating compound. A (Fig. 10) is a bent piece of metal, the lower portion of which so joins the disk that the motion of the key causes it to ascend or descend, while its upper portion presses against the tape. As the key is turned, the piece A pushes back the hammer B, until the bend at C is reached when the hammer is released and springs forward striking one of the fulminating dots which explodes and lights the gas. There is nothing about the device to get out of order and no skill is required to operate it, as it works automatically through turning the same key which must be moved to turn on the gas. There is no chance of lighting the fulminate save by the operation specified and the arrangement is such that the hammer does not fall until just as the key is placed so as to turn the gas fully on, which insures ignition. It is very safe and handy in closets, cellars, and all places where the gas is used occasionally.

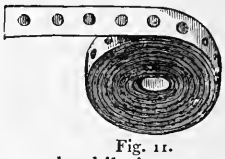


Fig. 11.

Dr. Arnott, a well-known English writer on

the subject, suggests the following rules for using gas:—1. Have the apparatus made by competent workmen. 2. If any leak be perceived, turn off the meter. Have it promptly attended to, and open the doors or windows to prevent accumulation. 3. On no account carry a light of any kind where there is a smell of gas. 4. Have rooms in which gas is burnt ventilated from near the ceiling. To these may be added:—5. If the gas flickers noisily, turn it lower to save both the eyes and the gas and to prevent smoke. If turning lower does not produce a steady flame, probably the burner is worn out and economy requires a fresh one. 6. At least once a year make the rounds of the burners in frequent use and substitute fresh ones for those worn out. Any man who uses gas ought to be able, if disposed, to keep a pair of pliers, and do this himself. 7. Use one large burner rather than two small ones. You get more light for the money. 8. If the gas generally "goes up and down," water in the pipes is indicated. This is apt to come from condensation outside the house, in cold weather. Notify the company to pump it out. Sometimes water will thus accumulate at the bottom of a bend in the pipe operating as a sort of trap, and shut off the gas entirely. (*See* METER.)

GAUFFERING.—This is done with a pair of light tongs, about the size of a pair of shears, with the blades nearly round. The frill, wrong side upwards, is held on the edge of the ironing cloth with the left hand, while the right, taking the gauffering-iron, properly heated, seizes hold of the frill well in the gathers, with the left blade under and the right over it, after which with a slight twist from left to right, two flutes in opposite directions are made by one action, the fingers of the left hand pressing the adjacent part of the frill against the cloth, thus resisting the twist of the iron, and causing it to smooth and round out the flutes. As the irons cool very rapidly, two or three must be kept heated, placing them on the ironing-stove or in the fire; use them of about the same degree of heat as ordinary irons.

GAUZE.—An extremely light and transparent fabric of silk, very loosely woven, the threads being all at some distance from each other. Common gauze is cotton, plain, striped, or figured, and can be gotten from a yard to two yards wide. In the best kind the figure is formed of silk; a sort with flowers of gold is brought from China. *Lisse Gauze*, is a plain but superior kind. *Craped Lisse Gauze* is crimped or craped. *Gossamer* is a very rich gauze used for veils; it is four times as thick and strong as the common gauze, though nearly as open in its texture. It may be had four and five quarters wide.

GELATINE, (Cooper's Isinglass and Gelatine.)—This is made from the sinews of the feet of calves and cattle. They pass through a tedious process of preparation for some months. In the last process, before melting, they are transferred every day, for nearly two weeks, from one vat of clean water to another. It is said that Coxe's gelatine is made from the clippings of skins; it cannot be made from hoofs, as some suppose. Russian isinglass is made simply by drying the sounds of fish. It was formerly used for jellies, blancmange, &c., but Coxe's gelatine, and Cooper's gelatine and isinglass, are found so excellent, and are so much cheaper, that it is now but rarely used for these purposes. The Russian isinglass costs from six to seven dollars a pound; Cooper's isinglass costs but ninety cents. The shreds of gelatine are not so fine as those of Russian isinglass, inasmuch as the gelatine having no cellular membrane to hold it together, will not cohere sufficiently to allow of the same degree of subdivisions as isinglass. Of the gelatines or Cooper's isinglass, one ounce is sufficient for a quart of jelly or blancmange; more is often used, but it takes very much from the delicacy of the preparation.

Gelatine and Russian isinglass may be distinguished from each other by the following directions:—The *shreds of isinglass* when dissolved in cold water become white, opaque, soft and swollen; the swelling is equal in all directions, and under the microscope they appear quadrangular. In boiling they dissolve nearly without residue. The smell of the dissolved isinglass, when hot, is somewhat fishy, but not unpleasant. The moistened shreds, or the solution, exhibit to test-paper a neutral, or faintly alkaline, and rarely a slightly acid, reaction. The *shreds of gelatine*, on the contrary, when placed in cold water, swell up, acquire increased transparency, and become translucent and glass-like. The form which they take in swelling is not regular like that of isinglass, but they become expanded, flat, and ribbon-like, the broad surfaces corresponding to the incised margins. The dry threads on the uncut surfaces frequently present a peculiar shining lustre, not unlike that of tinsel. In boiling water the shreds do not entirely dissolve, but in most cases a copious deposit falls to the bottom of the glass. The smell of the hot infusion is like that of glue, and therefore disagreeable. The moistened filaments or the solution of gelatine usually exhibit a strong acid reaction to test-paper; this, in some cases, is due to the substances used in bleaching it, and is not necessarily indicative of anything deleterious.

GENTIAN.—An herb growing wild in the Alps, Apennines, and Pyrenees, and represented by one or two species in the United States. The root is much employed in medicine. It is cylindrical, ringed, and more or less branched; and is sold in a dried state, in pieces varying from a few inches to more than a foot in length, and from half an inch to two inches in thickness.

Gentian is an excellent tonic bitter, and not being astringent, is often used in diseases of the digestive organs, in cases of general debility, and as a febrifuge. It can be administered in the form of an infusion, an extract, or a tincture—the two latter are sold in the drug-stores. Only small quantities of the infusion should be

made at any one time, as it ferments rapidly and spoils.

GERANIUM.—This most popular of plants, is also one of the easiest to cultivate. Plants of any kind, and in every stage of growth, can be gotten of florists; and these may be propagated to any extent by cuttings, with little or no trouble. Take the cuttings in June or July from the healthiest plants; plant them in small pots filled with a compost of loam and sand, having one or two inches of the former on the top of the pot. Insert the cutting firmly about half its length, and keep the sand sopping wet until it has rooted; when one or two leaves are developed, transplant it into a larger pot filled with good rich loam mixed liberally with manure, and by November you will have vigorous plants for house culture. In the open border, a rich light loam will grow geraniums to perfection, and the soil fresh from the woods and pastures is best of all; persons in the country can obtain this by lifting the sods from cow or sheep pastures, and taking the earth from under them. Liquid manure applied twice a week during the summer will cause them to bloom profusely.

The shrubby kinds of geraniums are the most tender, and when placed out of doors, should be defended from strong winds, and be so placed as to enjoy the sun until eleven o'clock in the morning. As the shrubby kinds grow fast, so as to fill the pots with their roots, and push them through the opening at the bottom, they should be moved every two or three weeks in summer, and the fresh roots cut off. They should also be newly potted twice in the summer; once about a month after they are placed out of doors, and again towards the end of August. When this is done, all the roots outside the earth should be pared off, and as much of the old earth removed as can be done without injuring the plants. They should then be planted in a larger pot; some fresh earth should first be laid at the bottom, and on that the plant should be placed so that the old earth adhering to it may be about an inch below the rim of the pot; it should next be filled up, and the pot slightly shaken; the earth must then be gently pressed down at the top, leaving out a little space for water to be given without running over the rim; finally, the plant should be liberally watered, and the stem fastened to a stake, to prevent the wind displacing the roots before they are newly fixed. As the branches grow, and new leaves are formed at the top of them, the lower ones may die, and should be plucked off every week. Geraniums, except the shrubby kinds, require shelter from frost only, and should have free air admitted to them, when the weather is not very severe. In sultry weather, they should all be watered liberally every morning, except some few of a succulent nature, which must be watered sparingly; the latter may be known by plucking a leaf from them. During the winter, geraniums are usually kept as house plants, and are unsurpassed for this purpose; but they can also be preserved in this way:—Dig them up before the first frost blights their leaves, and after cutting away all the tender shoots and buds, and shaking the earth from their roots, hang them up in a dark, cool, dry cellar, *heads downward.* In the spring, they can be brought to light, the branches trimmed off, and planted in boxes in a warm kitchen. They will soon put forth leaves and be ready to transplant to the garden.

Double Geraniums.—These do not drop their leaves like the single varieties, and their clusters of flowers—of all shades of scarlet and pink—are of an immense size. They flourish better if partially shaded from the intense heat of the noonday sun, and will bloom until the first frost comes. Choice varieties are:—*Crown Prince*, brightest rose color; *Emile Lemoine*, cherry-carmine, *Gloire de Doubles*, cerise with white centre (finest of all); *Gloire de Nancy*, brilliant scarlet; *Marie Lemoine*, rosy-pink.

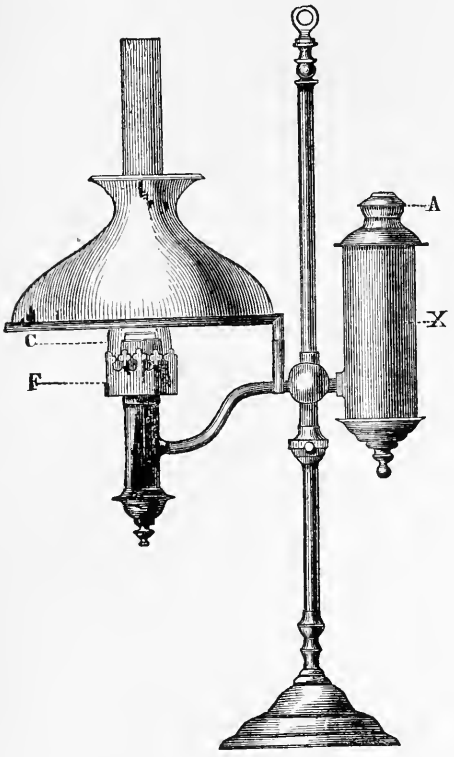
Sweet-scented Geraniums.—These are indispensable for bouquets and vases. Formerly, the *Rose* and the *Oak-leaved* were the only kind commonly cultivated, but now there are more than a dozen fine varieties. The following are the best:—*Denticulatura; Graveolus; Lady Plymouth; Odoratissimum; Shrubland Pet.*

Zonale Geraniums.—These are admirable in coloring, and of very free growth; their trusses of flowers are five to six inches in diameter, and are of all shades, from the most dazzling crimson and brightest rose, to the purest white. Choice varieties are:—*Blue Bells*, magenta pink; *Christine*, rose pink; *Coleshill*, scarlet, enormous flowers; *Giant de Battailes*, dark crimson; *General Grant*, dazzling scarlet; *Incomparable*, striped; *King of Roses*, scarlet, shaded to magenta; *Madame Werle*, white, with pink centre; *Maid of Kent*, richest pink; *Mrs. Keeler*, peach blossom hue; *Reine des Vierges*, pure white; *Warrior*, intense scarlet.

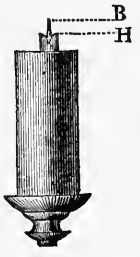
Lilliputian Zonales, or Tom Thumb Geraniums, are dwarfs, growing from six to ten or twelve inches high; they are very stocky, and their flowers are fully equal in size and beauty of coloring to those of the larger kinds. Desirable varieties are:—*Baby Boy*, scarlet, with white eye; *Little Dear*, delicate rose, spotted white; *Little Gem*, brilliant vermilion, white centre; *Pretty Jemima*, scarlet with white centre.

GERMAN SILVER.—The best ware of this material resembles silver, and is equally durable. It is very cheap, and, when properly taken care of and kept bright, looks very well. After using, it should be put immediately into hot water, washed well, and wiped dry with a soft cloth. Once a week it should be washed in soap-suds, and then cleaned with whatever is used for cleaning silver-ware. Should it become discolored or spotted by vinegar or other acids, wash it first, and then clean it with sweet oil and powdered rotten-stone. If the ware has become very much discolored, mix a quarter of

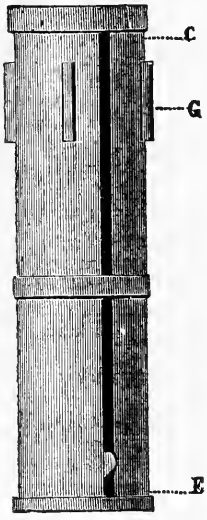
a pint of vinegar with half an ounce each of alum and cream of tartar; add to this a pint of boiling water, dip the plate into the mixture, and rub it dry.



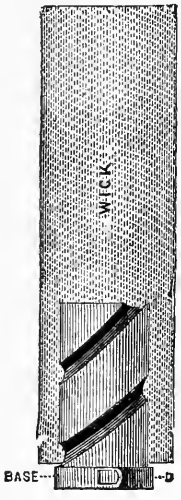
German Student Lamp (*or* St. GERMAIN). —This favorite and really excellent lamp is constructed on the same principle as the Argand Lamp. (*See* ARGAND). Its peculiarity is that the fountain of oil (A)., is placed on the side of the centre piece higher up than the wick with a self-acting valve H, by which the reservoir X is fed from it. For study, sewing, or any work requiring a concentrated light this lamp is unequalled. It gives a very soft, brilliant and steady light, and, with ordinary care, will emit neither smell nor smoke. To fill the lamp take out the holder, A, invert it and pour in the oil till it reaches the valve H; then pull



up the valve by means of the wire B, invert it, holding it above the holder X so that any oil which may escape drops into this holder; replace it in the holder X. To put on the wick,



take off the chimney-holder F, take out the cylinder C, take out the smallest cylinder D,



tie the wick at the base of Cylinder D, then replace the cylinder D in the large one C, taking care to push it down as far as the point E. Replace everything as before, the large cylinder C having the brass catches G up, and the ring E down; To raise the wick turn the chimney-holder.

The wick should be trimmed regularly. If a crust has formed, do not disturb it, but only remove any little point or unevenness that may occur; do not use the scissors unless the wick, through uneven draft, should have coaled or charred unevenly. By this method you will have an even flame, and the wick will last much longer than when cut frequently. If your lamp should make a humming noise, which is caused by the shank of the chimney being of the wrong length, raise the chimney slightly, or change it for one with a longer shank.

Use kerosene or spirits in place of water for cleaning chimneys. The brass part of the lamp may be cleaned with Vienna lime and kerosene, and polished with rouge.

Some lamps are made to burn sperm, lard, or olive oils. Those made for heavy oils will not burn kerosene, and *vice versa*. A kerosene lamp, with one-twelfth or one-eighth of a heavier oil mixed with kerosene, is all that can be desired.

GHERKIN.—A very small species of the cucumber—it is sometimes called "Jamaica cucumber." The fruit is oval in shape, and of a light green color, about the size of a common egg-plum, and thickly covered on the outside with prominent flesh species or prickles. When cut its smell is like that of a cucumber, and it is very full of small seeds. Gherkins are used only for pickles, and for this purpose are excellent. They are not much cultivated here, but may generally be found in the markets in August and September. The method of raising them is the same in all respects as that for raising cucumbers. (*See* PICKLES.)

GIBLETS.—These include the heads, neck, gizzards, livers, legs, and ends of wings of chickens, ducks, geese, turkeys, and other birds, tame or wild. They are used for stewing, fricassee, soups, pot-pie, and gravies. Prepare them thus:—After carefully plucking and singeing those that are covered with skin, cut off the beak, take out the eyes, and split the head in two; cut the neck into not less than three pieces; chop the wings across in two; skin the feet, by scalding, and cut off the claws; cut the heart in two; cut the gizzard, after skinning and cleaning, into four pieces; leave the liver as it is. Place them in a bowl or pan, pour boiling water and a little salt on them, let them stand five or six minutes, then wash and drain them, and they will be ready for cooking. (*See* PIES, and SOUPS.)

Fricasseed Giblets.—Put a piece of butter or lard in a stew-pan, and set it on a good fire; when melted, sprinkle into it, little by little, a teaspoonful of flour; stir together, and when of a brownish color add a gill of broth, the same quantity of warm water, a sprig of parsley, a pinch of grated nutmeg, two small onions, salt and pepper, and lastly the giblets. Cook for about two hours. Dish the pieces, strain the sauce, mix with the yolk of an egg well-beaten, and pour it over the giblets; then serve.

Stewed Giblets.—Prepare them as above. Put them in a stew-pan with a small quantity of water, season with onion, sweet herbs, a very small piece of mace, salt and pepper, and stew slowly for *two or three hours*. Before serving give them one boil with a teacupful of cream, and a tablespoonful of butter rubbed in a teaspoonful of flour.

GIDDINESS. (*See* VERTIGO.)

GILLIFLOWER.—The annual varieties of the Gilliflower are very pretty summer blooming plants. The seeds should be sown in a hot-bed in April, and when the frost is well out of the ground, transplant them to the garden. Select a showery day; or transplant after nightfall, water freely, and protect from the sun next day. The removal must be made very carefully, for they bear it poorly, owing to their long, fibreless roots. The flowers are white, purple, red, and yellow all summer.

GILT FRAMES.—*To protect from flies.* (*See* FRAMES.)

GIMP.—A kind of silk, woollen, or cotton twist, often with a metallic wire, or sometimes a coarse thread, running through it. It comes of various widths, woven in a variety of patterns and colors, and is much used as a trimming for dresses, furniture, etc. The worsted is the most durable, but the silk is the richest.

GIN.—An ardent spirit, formerly made by fermenting juniper berries, but now produced chiefly from corn, wheat, barley, or some other grain. *Hollands* is a variety of corn spirit, flavored with juniper berries; and *English gin* consists generally of plain corn spirit flavored with oil of turpentine and a small quantity of other substances. American gin varies in flavor with every distiller. Probably nothing used as a food by man is liable to greater and more injurious adulterations than gin; and the difficulty of getting it free from any poisonous drug should induce every one to abstain from its use.

Julep (Gin).—Take one gill of gin, half a gill of maraschino, four sprigs of mint, and one pint of pounded ice; shake together, sweeten with a spoonful of sugar, and as the ice melts, drink the julep with a straw.

GINGER.—The ginger of commerce is the root of a plant (the *Zingiber officinale*) which is cultivated in Asia, Africa, and the tropical parts of America, the largest supply being furnished by the West Indies. There are two kinds of ginger, but the difference consists chiefly in the mode of preparing it. *White* ginger is composed of the best pieces, from which the outer skin has been stripped off; they are then well washed and dried in the sun: it breaks with a fibrous fracture, and is the strongest and best flavored. *Black* ginger is an inferior kind, which is only scalded before being dried. *Preserved ginger* comes from the West Indies. It is made by scalding the roots when they are young and full of sap; then peeling them in cold water, and putting them into jars with a rich syrup, in which state we receive them. It should be chosen of a high yellow color with a

little transparency; that which is dark-colored, fibrous, and stringy is not good.

Ginger is one of the most agreeable and wholesome of spices; it is stimulating to the digestive organs, and much less hurtful than pepper. As a medicine it is highly useful, and an essence or essential oil of ginger is prepared as a more convenient mode of administering it. Ground ginger is frequently adulterated with wheat flour, potato flour, sago, cayenne pepper, and turmeric powder, none of which are prejudicial to health, but which detract greatly from its usefulness as a spice. It is best to buy it in the roots, and prepare it for use at home. (*See* CAKE, and CORDIAL.)

Essence of Gin.—Mix four ounces of powdered ginger with a quart of gin; let it stand ten days, shaking it up every day. This is an excellent stomachic, relieving flatulence, and aiding slow digestion. Dose: A teaspoonful in a glass of cold water.

Ginger-pop.—Put into an earthen pot two pounds of loaf sugar, two ounces of cream tartar, two ounces of best ginger bruised, and two lemons cut into slices. Pour over them three gallons of boiling water; when lukewarm, toast a slice of bread, spread it thickly with yeast, and put it into the liquor; mix with it also the whites of two eggs and their crushed shells. Let it stand till next morning; then strain and bottle. It will be ready for use in three or four days.

Mock Ginger.—Boil, as if for the table, small, tender, white carrots; scrape them until free from all spots, and take out the hearts. Steep them in water, changing it every day, until all vegetable flavor has left them. To every pound of carrot so prepared add one quart of water, two pounds of loaf sugar, two ounces of whole ginger, and the shred rind of a lemon. Boil for a quarter of an hour every day, until the carrots clear; and, when nearly done, add red pepper to taste. This will be found equal to West India preserved ginger.

Wine (Ginger).—*Take:*—Water, 1 gall; loaf sugar, 3 lbs; ginger, 1 oz; raisins ¼ lb; one lemon, and one orange; isinglass, 1 oz; yeast, 1 tablespoonful.

Boil the sugar and water a quarter of an hour, then take a little of it to boil with the ginger and peel of the lemon and orange for one hour. When nearly cold, mix the two together, and put in the juice of the orange and lemon, with one ounce of isinglass and a tablespoonful of yeast. Lastly, after twenty-four hours, pour the whole into a small cask, let it remain six weeks, then rack carefully; let it remain another month, and bottle. *This is an excellent receipt.*

GINGER BEER. (*See* BEER.)

GINGERBREAD. (*See* CAKE.)

GINGHAM.—A thin cotton fabric, generally of a check pattern, which is produced, not by dyeing or stamping the manufactured material, but by interweaving the colored threads. There are various kinds and qualities of gingham, bearing different names; "umbrella gingham" is woven with threads all of the same color. Gingham is generally a yard wide.

GLADIOLUS.—This has of late years become the chief favorite among the bulbous plants, and a few at least of its numberless varieties should find a place in every garden. It has become a regular "florist's flower," and good varieties can be purchased at from $1.50 to $3.00 per dozen. To grow the bulbs in perfection they should be planted in a sandy loam, enriched with peat and leaf-mould; a mixture of one-half loam, one-quarter peat, and one-quarter leaf-mould will prove the best soil. If strong manures are used, they cause the colors of the flowers to run into each other, and give them a muddy appearance. They may be planted in the open air during April or May. Plant in groups or singly; groups of three or five is the prettiest way. They should be set from two to four inches deep, according to the size of the bulbs. As they grow up they should be tied to a light stake, three to four feet long, which should be set when the bulbs are planted. Gladioli show to excellent advantage when planted around rose bushes or large shrubs; they bloom late in the season when most other flowers are passed, and if properly trained produce a charming effect. They are also very nice plants for house culture; six or eight bulbs can be grown in a twelve inch pot, and each kind tied to a thin stake. They will bloom finely. If the stalks are cut off for vases or bouquets, they will continue to bloom for a week or two, sending forth fresh flowers daily.

The gladiolus may be propagated by seed; the sowing should be in the fall, as soon as the seeds are gathered, or in February, March, or April, in peaty soil, in a frame covered with glass to exclude the frost, or in pots or pans, well drained. The seeds should be barely covered. The young bulbs require the same attention as the older plants, but as they do not bloom until the third summer, it is more convenient and satisfactory as a general thing to buy the bulbs of the florist. They increase very rapidly; from one bulb, two or three will spring.

The gladiolus will not survive our northern winters, and must always be kept in a cool dry place. When the frost has killed the leaves, dig up the bulbs, dry them in the sun, cut off the leaves an inch from the stem, and put the bulbs in a paper bag. Kept in a frost-proof cellar, they will retain all their life, and may be planted out in the spring as soon as the frost is out of the ground. There are three species, however, (*G. Byzantinum, Communes,* and *Roseus,*) which are tolerably hardy, and if once planted in the open border will flower well year after year with little attention. Bulbs of these varieties should be planted in November, and need no protection; though they must be planted deep enough to escape severe frosts and to avoid being thawed out of the ground.

The varieties of the gladiolus are almost numberless and nearly all are worthy of cultivation. Long lists are given in the florists'

catalogues, and these may be consulted; but Mr. Rand suggests that for a dozen *choice* varieties one should choose: *Surprise*, clear red; *Lord Campbell*, splendid yellow; *Vulcain*, dark scarlet; *Pleuton*, clear red, shading to pure white; *Celine*, rosy white, with amaranthine lines; *Ophir*, straw color, mottled with purple, *La Quintaine* peach cherry; *Raphael*, deep cherry, lighted with white; *Rembrandt*, vivid scarlet; *Isoline*, white, shading to pink; *Jeanne d'Arc*, pure white, rose-tipped petals; *Princess Clothilde*, rose, with cherry markings; and *Count de Morny*, deep, cherry crimson, with white lines. For the same number of cheaper sorts he recommends: *Penelope*' rosy white; *Goliah*, rose cherry; *Aristotle*, rose, marbled with red; *Empress* white, marked with pale pink; *Jauire* cherry with white; *Nemesis*, cherry, clouded with white; *Hebe*, clear rose; *Fanny Rouget*, carmine and flesh color; *Sulphureus*, sulphur yellow; *Archimedes*, rosy red; *Vesta*, pure white with purple lines; and *Don Juan*, deep red, with faint white lines. The following, he says, should be in every collection, however small: *Count de Morny*, *La Poussin*, *Breuchleyensis*, *Vesta*, *Penlope*, *Hebe*, *Pleuton*, *Calypso*, *Vulcain*, *Madame de Vatry*.

GLANDERS. (*See* HORSE.)

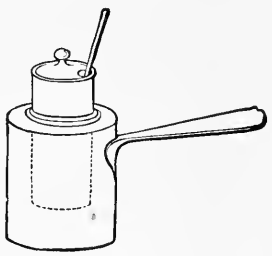
GLASS.—Glass is commonly classified as follows: bottle glass, window glass, plate glass, flint glass, crystal, strass, enamel. The principal ingredients are silica, lime, soda, potash, and oxide of lead; and the various kinds are made by varying the ingredients and their proportions. The coloring matters are metallic oxides. Many different substances will attack one or another of the substances in glass, and in time change its color or texture. Glass that loses its polish when heated will be affected by acids. Attempts have been made to produce a glass which will not break; but thus far the only result is a glass which stands heavy blows so long as it is free from scratches and bruises. If the minutest corner be broken, the whole instantly flies into fragments.

Blue Glass.—There is just now a furor about blue glass as a promoter of health. It is claimed that it intercepts certain rays of the sunlight, and transmits others. But it remains to be proved that this is of any benefit to animal or vegetable life.

To Clean Cut Glass.—Wash it in warm water, and let it dry thoroughly; then polish with a soft brush and prepared chalk.

GLAZE.—This is merely *strong*, clear gravy or animal jelly boiled down to the consistency of thin cream; but this reduction must be carefully managed that the glaze may be brought to the proper point without being burned; it must be attentively watched, and stirred without being quitted for a moment from the time of its beginning to thicken; when it has reached the proper degree of boiling, it will jelly in dropping from the spoon, like preserves, and should then be poured out immediately, or it will burn. When wanted for use, melt it gently by placing the vessel which contains it in a pan of boiling water, and with a paste-brush lay it on the meat, upon which it will form a sort of clear varnish. In consequence of the very great reduction which it undergoes, salt should be added to it sparingly when it is made. Any kind of stock may be boiled down to glaze; but unless it be strong, a pint will afford but a spoonful or two: a small quantity of it, however, is generally sufficient, unless a large repast is to be served. Two or three layers must be given to each joint. The glaze, when cold, becoming a jelly, gives a rich and savory appearance to the articles which it envelops.

GLAZING.—The glaze for meats is made as above. A beaten egg, or syrup, or jelly, or egg



Glazing Pot.

and sugar, etc., is used to glaze cakes, and pastry. *Glazing* is done with a brush or with feathers; dip the brush into the egg or jelly and spread it on the cake or other object as directed in the different receipts. It is also done

Glazing Brush.

by sifting powdered sugar on cakes which are put back into the oven for a short time—till the sugar is melted.

GLOVES.—Light kid gloves may be cleaned by rubbing them thoroughly with magnesia, moist bread, or India rubber; Indian meal is also good. Or, lay them on a clean towel, rub them with a piece of flannel dipped in hot, strong lather of white soap, till the dirt is removed, using as little water as possible. Hang them up at a distance from the fire to dry gradually, and after they are quite dry, pull out the shrivels and stretch them on the hand. If so badly soiled that they cannot be cleaned, sew up the tops of the gloves and rub them over with a sponge dipped in a decoction of saffron and water. The gloves will be yellow or brown, according to the strength of the decoction. (*See* CLEANING and DYEING.)

GLUE.—A common substance for cementing, made of the skins and gelatinous parts of animals, boiled to a thick jelly, and then formed into a solid mass by spreading it out in thin layers upon a net and drying it until it is quite hard, in which state it is sold. Good glue is of

a light brown color, semi-transparent, and free from waves or cloudy lines. When desired for use it should be broken into small pieces and placed in a vessel containing sufficient water to cover it, in which it will soften and swell; then set this vessel into another one containing water in which are placed a few pebbles or nails to prevent the bottoms of the two vessels from coming in contact; set this over the fire, and when the glue is dissolved and has boiled a few minutes, it is ready for use. It must be kept hot while using it.

GLYCERINE.—When an alkali is added to oils and fats, the fatty acids combine with the alkali and form soaps. At the same time glycerine is formed; easily soluble in water or alcohol, it has scarcely any perceptible smell, and only a sweet, and rather insipid taste. It forms a moist and pleasant covering for the skin in many of its diseases. Its healing, as well as protective, properties render it peculiarly applicable as a dressing for bruised or excoriated surfaces, such as burns or scalds, to which it may be applied with a camel's hair brush. Where there is harshness, dryness, or a scurfy state of the skin, a lotion composed of one part glycerine to fifteen parts of plain water, or elder-flower water, is very serviceable. Glycerine soap is also excellent for all these purposes; and a *salve* for chapped hands, cracked lips, etc., may be made as follows; dissolve one ounce of powdered borax in one ounce of rose-water, and add half an ounce of glycerine; melt one drachm of spermaceti in the same quantity of olive oil and ten drachms of pure lard; add the latter to the former mixture little by little, stirring all the time, and continuing to do so until nearly cold.

In deafness and other affections of the ear glycerine has also been found serviceable. In many cases of dysentery it is often administered both as a medicine and as an emetic; for the former mix twelve drachms of glycerine in three ounces of orange-flower water and three ounces of plain water: dose, two tablespoonfuls every hour; for the latter, add one ounce of glycerine to five ounces of a decoction of bran or linseed, and take twice a day.

GOAT-FLESH.—This is very commonly eaten in Switzerland and other mountainous parts of the world; but though occasionally found in our markets can scarcely be reckoned among the articles of food used generally in this country. In its general characters, goat-flesh resembles mutton, but it is harder and tougher and has a stronger flavor, so that it is seldom preferred to it. According to Dr. Smith, however, it is much more nutritious than mutton, so far as nitrogenous or flesh-forming elements are concerned, but is inferior in the carbonaceous or fat forming elements. The flesh of the kid is more esteemed than that of the goat; it has a flavor not unlike that of venison. Cook in the same way as mutton or lamb.

GOITRE.—An enlargement of the thyroid gland, occasioning a swelling of the throat, which frequently attains a very large size. It is not inflammatory or malignant in character, is free from pain, and generally of the natural color of the skin. At first the tumor is soft and elastic, but as it increases in size it becomes hard and firm. Its size sometimes becomes so great as not only to be a serious inconvenience, but even to impede respiration and obstruct the voice. Goitre is endemic or common in certain regions of the world, such as Switzerland, Savoy, and the Tyrol, in Europe, and certain portions of the Andes and Himalayas; but to what peculiarity of these regions it is owing is very uncertain, though it is generally attributed to a calcareous impregnation of the water. It also occurs hereditarily, independent of endemic influence. It is much more common among females than males, and usually occurs about the age of puberty.

Treatment.—Iodine is the great remedy for this disease, either administered internally in small doses for a long time, or applied externally in the form of an ointment or of the tincture painted over it every night.

GOLD-FISH.—The extreme elegance of form of gold-fish, the splendor of their scaly covering, the ease and agility of their movements, and the facility with which they may be kept alive in very small vessels, render them very popular household pets. Though the fish are seen to best advantage when kept in glass globes, yet these globes are very unsuitable dwellings for them. Fish require abundance of air; and scarcely any other vessel than a globular one contains so much water with so little exposure to the air. They also require shade when they feel the want of it; and it need scarcely be said that all day long a glass globe is in a blaze of light. Further, the water in a globe must be changed daily; consequently the fish must be lifted out either by the hand or a small net, and it is utterly impossible to handle these delicate creatures without injuring them at one time or another. Where there can be a contrivance made for letting in a flow of water, be it ever so small, say a drop a minute, in and out of the vessel containing the fish, the water will not require to be changed; and a small water plant, say the very curious *vallisneria spiralis*, would afford the required shade. But as a globe is always the most popular domicile for these fish, we may give a few directions as to how they should be treated in it. When purchasing a globe, select as wide-mouthed a one as can be had, and subsequently never fill it more than three-fourths full of water; by these means you will secure as much air for the fish as is possible under the circumstances. Keep the globe also in the most airy part of the room, never letting it be in the sun or near the fire. Change the water daily, and handle the fish tenderly in doing so. Never give the fish any food; all they require when in a globe is plenty of fresh water and fresh air—they will derive sufficient nutriment from the animalculæ contained in the water. Many gold-fish are killed by having bread given to them. They eat it eagerly, but the uneaten

crumbs immediately turn sour and deteriorate the water to an extent which makes it unfit to sustain life.

Two diseases, being the most frequent, may be pointed out as the ones to which gold-fish are most fatally liable. Sometimes a fish seems less lively than usual, and, on a close inspection, will have a sort of mealy look, and, in a day or two, this mealiness will turn out to be a parasitical fungus. There are several reputed remedies for this very mysterious disease, but there is absolutely nothing for it but to take the fish, at the first appearance of the disease, and throw it away, for it will not recover, and it will only infect the others. We would, however, advise the inexperienced gold-fish keeper, whenever a fish seems unhealthy, to place it by itself for a few days: he will then see whether the fungus makes its appearance; if not, the fish may recover, and be returned to the globe. The other disease is apparently an affection of the air-bladder, arising from being supplied with too little air. When under the influence of this disease, the fish swims sideways, with its body bent as if its back were broken, and in a short time dies. Whenever these symptoms are observed, the fish should be placed in a large tub of water, and a small stream of water allowed to drop into it. The water, through dropping, becomes more aërated, and the fish, thus receiving an abundant supply of air, will frequently recover.

GOLD-LACE, (to clean.)—Burn some rock alum; then powder it very fine and sift it. Dip a clean soft brush into the powdered alum and rub the gold-lace with it very briskly; afterwards wipe it with a clean soft flannel. Gold embroidery may be brightened in the same manner.

GOOSE.—Among the best breeds of geese for the table are the Bremen, Chinese, and African. Hybrids are also highly prized for their superior size and flesh. Though greatly relished by some, the goose is seldom a favorite food, and is generally considered very poor eating. The flesh abounds in flavor, and is said to be highly stimulating. When young it is tender, but, in general, it is only adapted for good stomachs and powerful digestion, and should be sparingly used by the sedentary or the weak, and by persons subject to cutaneous diseases. Its strong flavor is thought by some to require modification by stuffing with sage and onions, while others relish it only when this is not demanded. The fat of the goose is reckoned peculiarly subtle, penetrating, and resolvent, and is usually preserved for domestic application. The average weight of the large kind of geese is from nine to fifteen pounds, and instances have been known of their weighing thirty pounds when duly fattened; but the smaller breeds are preferable for the table. Geese are called *green* until they are three or four months old, and these are something of a delicacy.

In purchasing geese, select those which are fresh and fat, with the head and giblets cut off, and nicely drawn, as it will make a saving of nearly two pounds in weight. The bills and feet are red when the goose is old, yellow when young; fresh killed, the feet are pliable, stiff when too long kept.

Wild Geese are considered superior to the domestic for eating purposes, and the young are very fine. They are best in October, November, and December; but are found in the markets as late as January. *Brant* or *Brent* geese have long been famous among wild fowl and are much sought after

Roast Goose.—Truss, stuff, baste, and roast exactly like Duck; but serve with apple sauce. A specially nice way to roast is to begin by basting with a teacupful of cider; then, when it begins to warm, dredge with flour; afterwards baste with its own fat and gravy, mixing with the cider. The roasting of a full-grown goose takes at least two hours; and the nearer it draws to a close, the more assiduous must be the basting; the fatter the goose the more liberal may be the dredging with flour.

Goose for Roasting.

Green Geese are never stuffed. Season the inside with pepper and salt, and roast the goose at a brisk fire from forty to fifty minutes. Serve it with good brown gravy only.

Stewed Goose.—Take an oval or oblong boiler, just big enough to hold the goose. Cover the bottom with thin slices of bacon, and lay the goose upon them; surround it with a calf's foot cut in pieces (this may be omitted), and season with cloves, onions, sliced carrots, pepper, salt, and blades of mace; pour over it a wineglassful of brandy, one of white wine, a pint of broth, and a pint of water. Close the lid tightly, and stew slowly for five or six hours. This may be eaten either hot, with its accompaniments, or cold, with the gravy about it in the shape of jelly.

GOOSEBERRY.—This does not attain the perfection with us which it reaches in England, but is nevertheless one of the pleasantest and most useful of our smaller fruits. The berries are acid and at the same time sweet, and have a peculiarly bland and grateful flavor. When ripe they form an excellent dessert eaten with sugar, but they are used chiefly in making pies, tarts, sauces, preserves, etc. There are a great number of varieties of the gooseberry, but the red, yellow, green, and white, and those of a medium size and free from mould are the best. They make their appearance in our markets from the South early in May and continue until about the 1st of August.

Gooseberries may be propagated by layers and cuttings; they should be grown in a rich

but not wet soil. They are best if kept free from suckers and trained like trees. One third of the old wood should be trimmed away every autumn. (*See* COMPOTES, JAM, JELLY, PIES, PRESERVES and SAUCES.)

Champagne (Gooseberry).— Gather the red gooseberries when just turning, and pour cold water over them in the proportion of three quarts of water to one gallon of fruit; let this stand a week, stirring every day, and bruising the berries till they are thoroughly mashed; then strain through a sieve, and add to every gallon of liquor four pounds of moist sugar; let the fermentation proceed for two or three days; then pass through a flannel bag into the cask, leaving the latter open till fermentation subsides; add to every five gallons of wine half an ounce of isinglass dissolved in a little of the wine, and close the cask. If the champagne is desired to be strong, add, before closing the cask, a bottle or two of brandy; but it will be brisk and agreeable without. It should remain twelve months in the cask before bottling.

Dried Gooseberries.— To seven pounds of gooseberries add a pound and a half of powdered sugar, which must be strewed over them in the preserving-kettle. Let them remain over a slow fire till they begin to break, and then remove them. Repeat this process for two or three days; then take the gooseberries from the syrup and spread them out on sieves near the fire to dry. The syrup may be used for other preserves. When the gooseberries are quite dry, store them in tin boxes on layers of paper. They will keep in this way all winter, and may be used for pies, tarts, etc.

Wine (Gooseberry).—I. *Take:*–Gooseberries; sugar; Malaga raisins; brandy.

Take ripe gooseberries, mash them well, and put them into a tub allowing for each quart a quart of water; let them stand all night, then strain them through a sieve, and press them with the hand. To every gallon put three pounds of moist sugar. Let it stand two days, and then put it into a cask with one pound of Malaga raisins to each gallon of liquor, and a little brandy; let it remain in the barrel three or four months, or till fine; then bottle it.

II. *Take:*–Gooseberries, 36 lbs; boiling water, 3 galls; sugar, 12 lbs.

To thirty-six pounds of ripe fruit add three gallons of boiling water; let it stand twenty-four hours, then strain off; add twelve pounds of good brown sugar, stir and skim occasionally for twenty-four hours more, and then put it into the cask to ferment. It will be ready to bottle in four months.

GOSSAMER. (*See* GAUZE.)

GOURD.—The gourd family is a large one, embracing the pumpkin, squash, etc.; but the name is usually applied only to the common gourd, or calabash. It is a creeping vine, rather ornamental in appearance, and grows luxuriantly wherever planted and without any attention. Plant the seeds in the early Spring. The fruit when very young and tender can be used for pickling, like cucumbers; as it grows old the shell or rind becomes hard, light, and strong, and makes excellent water-dippers, buckets, etc., etc.

GOUT.—A painful disease of the joints, generally of the feet and hands, and especially of the great toes. It occurs mostly in persons advanced in life and who indulge freely in the pleasures of the table, and is hereditary. A fit of the gout is generally preceded by indigestion, drowsiness, eructation, a slight headache, and sometimes vomiting. The appetite is often remarkably keen a day or two before the fit, and there is a slight pain in passing urine, and frequently an involuntary shedding of tears. Sometimes these symptoms are much more violent, especially upon the approach of the fit; and it has been observed that as is the fever which ushers in the gout so will the fit be; if the fever be short and sharp, the fit will be so likewise; if it be feeble, long and lingering, such will the fit be also. The regular gout generally makes its attack in the spring or the beginning of winter, in the following manner: At some time during the night the patient is seized with a pain in his great toe, or occasionally in the heel, or ankle, or calf of the leg. This pain is accompanied with a sensation as if cold water were poured upon the part, which is succeeded by a shivering with some degree of fever. Afterwards the pain increases, and settling among the small bones of the foot, the patient feels as if the part were stretched, burnt, squeezed, gnawed, or torn in pieces. The part at length becomes so exquisitely sensitive that the patient cannot bear to have it touched, or even to suffer any one to walk across the room. This torture usually lasts for twenty-four hours from the coming on of the fit; the patient then becomes easier, and the part begins to swell, appears red, and is covered with a slight moisture. Towards morning he drops asleeps, and generally falls into a gentle sweat. This terminates the first paroxysm, a number of which constitute a fit of the gout, which is longer or shorter according to the patient's age, strength, the season of the year, and the disposition of the body to the disease. The paroxysms, however, generally grow milder every day, till at length the disease is carried off by perspiration, urine, and other evacuations. In some patients this happens in a few days; in others, it requires weeks, and in some, months to complete the fit. When the fit is over, the system is relieved, and the patient feels, both in mind and body, better than before the attack. At first a fit of gout occurs only once in two or three years; but by degrees they become more and more frequent, more severe, and of longer duration. In its progress various parts of the body become affected and translations take place from one joint or limb to another, and after frequent attacks, the joints lose their strength and flexibility, and become so stiff as to be deprived of all motion. As the fits become more frequent and severe, so the constitutional derangements become more mark-

ed and constant. The appetite fails, indigestion is rarely absent, there is a tendency to costiveness, the mind becomes restless and irritable, calcareous deposits are formed in the arteries, calculi form in the bladder, and frequently the heart becomes diseased.

Treatment.—Topical applications should be only of soothing remedies. Colchicum is approved, but must be used with great caution, the dose should not exceed twenty drops once in four to six hours in a tumbler of water with some alkali, such as half a drachm of the bicarbonate of potash. As soon as it purges, or if there be great pain at the pit of the stomach, it must be discontinued. The judicious use of purgatives; abstinence from highly nitrogenous food and stimulating drinks; pure air, exercise, regular habits of labor and sleep, and avoiding exposure to cold, dampness, and fatigue of body or mind, is the only treatment that can be relied on; though, in special cases, a physician's advice may supplement it with direct remedies. If during an attack of gout, the pain quit the great toe, or knee, or hand, or whatever part it happened to be located in, and the swelling and redness disappear, and if at the same time, there ensues an agonizing pain in the stomach, coming on in paroxysms, laudanum in doses of twenty drops every hour may be of the utmost service till the doctor comes, who will probably give larger doses; hot bottles should also be unceasingly applied to the region of the stomach. If laudanum cannot be procured, strong brandy is the best substitute; but if the pain be inflammatory, and not spasmodic, brandy would do much more harm than laudanum. Some gouty persons experience great relief by drinking a tumblerful of an infusion made from green coffee.

GRAFTING.—The following directions are from the "American Fruit Culturist," by John J. Thomas (published by W. Wood & Co.):—

"Propagation by grafting differs from increasing by cuttings, by inserting the cutting into the growing-stock of another tree instead of directly into the soil. To effect these two requisites, it is needful *first*, that the operation be performed with a sharp knife that the vessels and pores may be cut smoothly and evenly, and the two parts be brought into immediate and even contact. *Secondly* that the operation be so contrived, that a permanent and considerable pressure be applied to keep all parts of these cut faces closely together. *Thirdly*, that the line of division between the inner bark and the wood should coincide or exactly correspond in each; for if the inner bark of the one sets wholly on the bark of the other, the upward current through the wood and back through the bark is broken and the graft cannot flourish or grow. *Fourthly*, that the wounded parts made by the operation be effectually excluded from the external air, chiefly to retain a due quantity of moisture in the graft, but also to exclude the wet, until, by the growth of the graft, the union is effected."

"1—The first requisite is best attained by keeping a keen, flat bladed-knife to cut the faces, and another knife for other purposes.

2—The second requires that the jaws of the stock, in cleft grafting press with some force, but not too much, against the wedge-shaped sides of the graft, a stock one-third of an inch in diameter will somtimes do this sufficiently; but three-quarters of an inch is a more convenient size. In whip grafting, the tongue and slip should be firmly crowded or bound together.

3—The third requisite is attained by close examination with the eye.

4—The fourth is accomplished by grafting wax, or grafting clay. An excellent grafting wax is made of three parts of rosin, three of beeswax and two of tallow. The wax may be directly applied when just warm enough to run, by means of a brush; or it may be spread thickly with a brush on sheets of muslin, which are afterwards, during a cold day, cut up into plasters of convenient size for applying; or, the wax, when cold, may be worked up with wet hands, and drawn out into thin strips or ribbons, and wrapped closely around the inserted graft; in all cases success is more certain when the wax is closely pressed so as to fit to every part, and leave no interstices; and it is indispensable that every portion of the wound on the stock and graft be totally excluded from the external air. In cool weather, a lantern, chafing dish or hot brick, will be found necessary to soften the plasters before applying them."

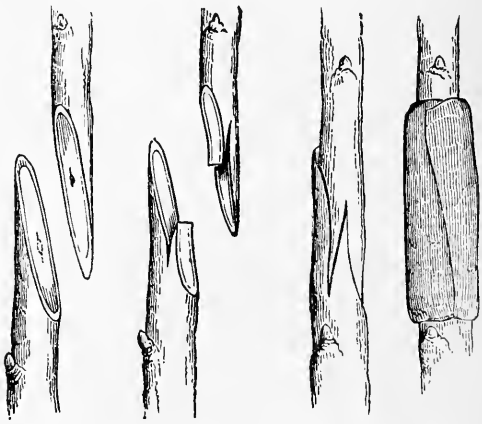


Fig. 1, Fig. 2, Fig. 3, Fig. 4.

"The above figures represent the two most common modes of grafting fruit-trees; Figs. 1 to 4, representing successive stages of *whip or tongue grafting*, from the sloping cut of the scion and stock, to the completion of the operation by the covering with the wax-plaster."

"Whip-grafting may be employed for large stocks, as shown by the following cut. In order that the line of separation between the bark and wood may coincide in both, the graft must be placed at one side of the large stock, *a*, sloped and tongued for the reception of the graft, *b*, their union being represented by *c*.

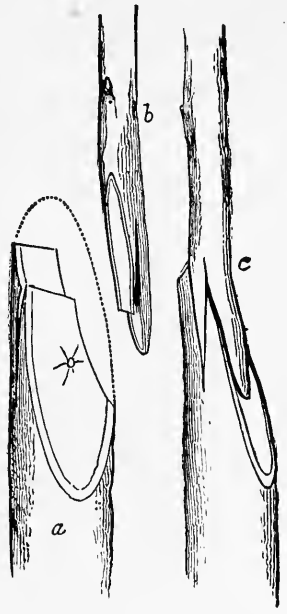


Fig. 5.

To facilitate the wrapping of the wax-plaster, one side and the upper point of the stock are pared off with a knife, before the two are joined, as shown by the dotted line. This is a good mode of grafting any stocks not over three-fourths of an inch in diameter, in the nursery row.

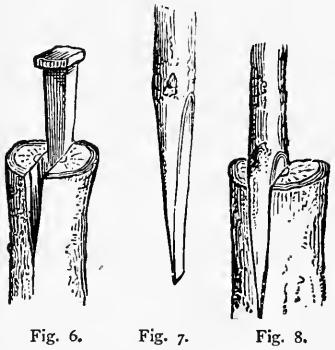


Fig. 6. Fig. 7. Fig. 8.

Fig. 6 shows a stock cut off for cleft-grafting, with the upright cleft separated by an iron or steel wedge, ready for the graft; Fig. 7, the graft cut wedge-form to fit it; and Fig. 8 the graft in its place after the wedge has been withdrawn, the projecting angle of the stock sloped off with a knife, and the whole ready for the application of the wax.

"Whip-grafting is particularly applicable to small stocks, or where the graft and stock are nearly all equal size; and cleft-grafting to stocks considerably larger than the scion. In all cases, where the stock is in any degree larger, the graft must be placed toward one side, so that the line between the bark and wood may exactly coincide at one point at least in both, as in the cross-section of cleft-grafting, Fig. 9.

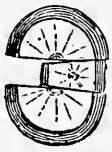


Fig. 9.

"In grafting the peach which, from its large pith and spongy wood, scarcely ever succeeds as commonly performed, it is found advantageous, in selecting the grafts to leave a quarter of an inch of the more compact two years' wood at the lower extremity.

With the plum and cherry, success is much more certain very early in spring, before the buds commence swelling, or even before the snow is off the ground. Apples and pears may be grafted later, and if the scions have been kept in good condition in a dormant state, they will mostly grow if inserted even after the trees are in leaf.

"After a graft is inserted, and as soon as the tree commences growth, the buds on the stock must be rubbed off in order to throw the rising sap into the scion. If large trees are grafted, the buds need only rubbing off the branch which holds it."

"Grafts are usually cut during the latter part of winter or early in spring. They may be preserved out-of-doors safely if buried in moderately moist earth by placing them in a box open downwards, and buried on a dry spot, being kept from contact with the earth by sticks across the box. They may be preserved in a cellar in a box of damp powdered moss. Sawdust answers the same purpose if not in large quantities so as to become heated.

GRAPES.—Grapes may be raised from either cuttings or seeds; the former is much the best way. Select the cuttings in the autumn from the well-ripened wood of the former year, and take five joints for each; bury them till April, then soak them for some hours and set them out aslant, so that all the eyes but one shall be covered. A gravelly or sandy soil is best for grapes. A southern exposure is best. Manure from the stable is more likely to do harm than good; the best fertilizer is some old bones sunk into the soil near the roots. Prune the vines the first year so as to leave only two main branches, pinching off all other shoots as fast as they appear. In November cut off all of these two branches except four joints. The second year, in the spring, loosen the earth around the roots, and allow only two branches to grow, and every month pinch off all side shoots; if they are very strong take off only a part and prune off the rest in the fall. In November cut off all the two main stems except eight joints. After the second year no more pruning is needed except

to reduce the side shoots for the purpose of increasing the fruit. There are several species of the native hardy grape, of which the *Isabella* is the most popular. The *Catawba* ranks very high, as do the *Concord*, *Diana*, *Clinton*, *Delaware*, etc.

Grapes ripen, according to locality, from the 1st of September until November, and, when carefully kept, a month or two longer. We have also the luscious foreign grapes, raised in hot and cold graperies from April until December, among which are the Black Hamburgh, White Muscat, White Sweetwater, Tokay, etc. The Syrian, a white species, produces the largest clusters. The White Malayan, of foreign growth, is found throughout the winter in grocery stores where imported fruits are kept. *Fox* or *wild* grapes are abundant from the middle of August to November; they are round and soft, with a pleasant, tart taste, and are used for pies, preserves, etc.

Grapes may be kept fresh for winter use in the following manner: Pick the bunches only on a warm day, and place them in a cool, shady place for at least three days; then pack them in paper boxes that will hold about ten pounds each. Between each layer of grapes place a single thickness of newspaper; the boxes should not contain more than three layers in thickness. Then place in a cool, dry room—not in the cellar, for the comparative dampness there will cause mold and decay. A few fine clusters for special table purposes may be preserved by cutting the bunches late in the season, but in good condition and on a

Grapes Preserved Fresh.

piece of the vine. Wax one end of the stem and put the other through a cork into a vial of water containing a layer of charcoal; make the cork around the vine tight with beeswax; then place the whole in a cool room with an even temperature. (*See* JELLY, and PRESERVES.)

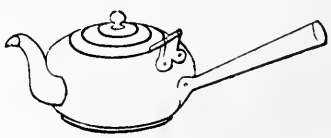
Wine (Grape).—I. Bruise the grapes, which should be perfectly ripe. To each gallon of grapes put a gallon of water, and let the whole stand a week without stirring. At the end of that time draw off the liquor carefully, and put to each gallon three pounds of lump sugar. Let it ferment in a cool place, and when fermentation ceases stop it up tight. In six months it will be fit to bottle.

II. Pick the grapes from the stems and break them slightly with the hand. Allow fifteen pounds of them to each gallon of water; let them stand for three days, then press them and draw off the liquor. Add two pounds of sugar to each gallon of the juice and water, and put into a cask and ferment. Examine it carefully once a week, and when fermentation has nearly ceased rack it off. Bung it down close for six months, and it will then be fit either to drink or to bottle.

GRATE.—Whenever coal is used as a fuel, grates are an essential part of the fire-place, and, next to the wood fire they furnish by far the healthiest means of warming a room. They are, however, the most expensive fires that can be had, and this is largely owing to the fact that the grate is constructed on wrong principles. It is nearly always too shallow—seldom more than two bars in height—and too deep from front to rear, so that in order to warm the room as much as possible the coal has to be piled on in a large heap, only the front part of which sends heat into the room—the greater portion of that which is consumed at the back merely heating the grate and chimney. A high grate, with four or five narrow bars in front, and a depth from front to rear of from five to six inches at the top and from three to four at the bottom, with a sloping back of fire-brick, though less elegant, would be infinitely more economical than the ordinary grate. Its advantages are that it would give a large front area of burning coal without any superfluous consumption of fuel behind, and that the ashes and cinders cleared out of the lowest bars could be thrown in the top of the grate, and, having to pass through the whole extent of the fire again, would be mostly consumed, leaving nothing but a little dust behind. Bituminous coal is pleasantest to burn in grates, but where it is used the flue should be nearly as deep as the grate itself, and the bars of the grate should be round and not close together.

The best material for grates is dead wrought iron. The polished steel bars, besides being hard to keep in order, are objectionable, because bright surfaces, while they reflect heat well, throw it off by radiation very imperfectly. SEE CHIMNEY.

GRAVY.—In any household, gravies are usually required only in moderation and a clever cook can always manage to supply at trifling



Gravy Kettle.

cost all that is generally needed for plain family dinners. But, however small the quantities

in which they are made, their quality should be particularly attended to, and they should be well adapted in flavor to the dishes they are to accompany. For some a high degree of savor is desirable; but for fricassees and other dishes of delicate white meats this should be avoided and a soft, smooth sauce of mild flavor should be used in preference to any more piquant relish. The necks of poultry, with the feet properly skinned, a few herbs, a morsel of ham or lean bacon, a bit of spice, and a few drops of mushroom catsup, will of themselves suffice to make a gravy for the broils from which they are taken; and if not wanted for this purpose they should always be stewed down or thrown into a stock pot, for which the shank bones of beef or mutton and all trimmings of meats should be reserved. No particle of fat should ever be perceptible upon gravies when they are sent to table, and when it cannot be removed by skimming they should be allowed to cool sufficiently for it to congeal, and be taken off at once. It may be cleared from such as have not been thickened by passing them through a closely woven cloth, which has been previously wetted with cold water. For burnt sugar *browning* for gravies, *see* CARAMEL. This should always be kept on hand.

Brown Gravy.—Put fresh meat cut in small pieces into a sauce-pan; season with salt and pepper and a bit of butter, and heat it half an hour, till brown, stirring so that it shall not stick. Pour on boiling water (a pint for each pound), simmer three hours, and skim it well. Settle and strain it, and set it aside for use; thicken as you need it with brown flour, a teaspoonful to half a pint.

Clear Gravy.—Slice beef thin; broil a part of it over a quick fire, just enough to give color to the gravy, but not to dress it; put that and the raw part into a stew-pan with onions, a clove or two, whole black peppers, berries of allspice, and a bunch of sweet herbs; cover it with hot water, give it one boil, and skim it well two or three times; then cover it over, and simmer till quite strong.

Fish Gravy.—Skin two or three eels or some flounders; clean them well; cut them into small pieces, and put into a sauce-pan; cover them with water, and add a little crust of bread toasted down, two blades of mace, whole peppers, sweet herbs, a piece of lemon-peel, and a teaspoonful of grated horse-radish; cover close and simmer; add a teaspoonful each of butter and flour, and boil till strong.

Game or Poultry Gravy.—A plain gravy for game or poultry may be made so that it will keep a week in moderately cool weather as follows: Cut lean beef thin, put it into a frying-pan without any butter, and set it on a fire, covered, but take care not to let it burn; let it stay till the juice that comes out of the meat is dried up into it again; pour in as much water as will cover the meat, and *let that stew away.* Then put to the meat a small quantity of water, herbs, onions, spice, and a bit of lean ham; simmer till rich, and keep it in a cold, dry place. Do not take off the fat till about to be used.

Hasty Gravy.—Chop up a pound of lean meat, a small onion, a few slices of carrot and turnip, and a little thyme and parsley; put these into a sauce-pan with half an ounce of butter, and stir them until they are slightly browned; add a little spice and a pint of water; clear the gravy from scum, let it boil half an hour, and then strain it for use.

Kidney Gravy.—Strip the skin and remove the fat from three fresh mutton kidneys; slice and flour them; melt two ounces of butter in a deep sauce-pan, and put in the kidneys with an onion cut small and a teaspoonful of fine herbs, stripped from the stalks. Keep these well shaken over a small fire until nearly all the moisture is dried up; then pour in a pint of boiling water, add half a teaspoonful of salt and a little cayenne or black pepper, and let the gravy boil gently for an hour and a half—or longer, if it be not rich and thick. Strain it through a fine sieve, and take off the fat; spice or catsup may be added at pleasure.

Poultry Gravy.—A little good broth added to half a dozen slices of lean ham, lightly browned in a morsel of butter, with half a dozen corns of pepper and a sprig or two of parsley, and stewed for half an hour, will make excellent gravy of a common kind. When there is no broth the neck of the chicken must be stewed down to supply its place.

Veal Gravy.—I. Flour and fry lightly in a bit of butter two pounds of veal; drain the meat well from the fat, and lay it into a small stew-pan; pour in a quart of boiling water; skim well, and add a little salt, a fried onion sliced, a carrot sliced, a small bunch of thyme and parsley, a blade of mace, and a few pepper corns. Stew these gently for three hours, pass the gravy through a sieve into a pan, and when it is quite cold clear it entirely of fat; heat as much as is wanted for table, and if not sufficiently thick stir in some browned flour and a little catsup. Beef gravy may be made in the same way.

II. Veal gravy may be made as directed for Clear Gravy, omitting the spice, herbs and flour.

GREASE-SPOTS. — (To Remove from Cloth.)—Grease-spots, if not made by mineral oils, may generally be removed from silk, woolen, cotton, or linen cloth, by simply using soap and water and a nail-brush, and afterwards wiping off the lather with a wet towel. When this fails, cover the spots with French chalk, scraped to a fine powder, lay a piece of brown paper over them, and on this set a warm iron. This will melt the grease, and the chalk will absorb it, and the whole may then be removed by brushing. If once is not sufficient, repeat the process. Or, the French chalk may be mixed with lavender water, or with benzine, so as to make a paste, which is to be put upon the stain: over this lay a piece of blotting paper, and run it over

with a hot iron; then brush off the chalk; common chalk will answer when French chalk cannot be had, but it is not so good.

Or, grate raw potatoes into water, so as to form a pulp; pass the liquid through a sieve into another vessel with an equal quantity of water in it, and let the potato subside; pour the clear liquor from the top, and bottle it for use; dip a sponge or a small brush in this, and wet the spot till it disappears; then wash it in clear water. Be very careful not to wet more than the spot or it will discharge the color of the fabric.

Scouring drops, made by mixing equal quantities of oil of turpentine and essence of lemon are excellent for taking stains and grease out of *silk*. Rub them on with a bit of flannel.

Marble.—Grease can be removed from marble by ox-gall and potter's clay wet with soapsuds (a gill of each); it is better also to add a gill of spirits of turpentine. Rub the mixture on the spots, let it remain for some time, and then wash off with warm water.

Paper.—Oil or grease can be removed from paper or books by rolling up each leaf and inserting it in a wide-mouthed bottle half full of sulphuric ether; shake it gently up and down for a minute, and on its removal the stains will be found to have disappeared. The ether evaporates rapidly, and a single sponging with cold water is all that is afterward required.

Or, dust on a little magnesia or French chalk, lay over it a piece of blotting paper, and pass a moderately heated iron across a few times.

Benzine also removes grease spots. Place a piece of linen of several folds on a table to act as a sponge in absorbing the benzine stretch the soiled article over the linen, dip a piece of cotton or flannel into the benzine, and rub the spot well; after which dry with blotting paper or fine linen. The benzine ought to be applied in a circular direction. Do not leave off until the liquid evaporates; then expose the article to a good current of air. Benzine is sold by all druggists, and should be kept in the house, ready for use. *Never carry it near a fire or burning substance of any kind, as it is likely to explode.* *See* CLEANING, STAINS and WASHING.

GREEN GAGE. (*See* PLUM.)

GREY-POWDER.—The name commonly given to a combination of three parts of mercury with five parts of chalk. It is most frequently given to children with clay-colored passages in doses of two to three grains once, or oftener, in the twenty-four hours.

GRIDIRON.—The ordinary gridiron is merely a square frame of iron, with cross-bars of the same. An improvement upon this consists in making the upper surface of these bars concave or grooved, and all terminating in a hollow trough near the handle, so as to save the rich gravy which would otherwise fall into the fire. Before using a gridiron it should be cleaned thoroughly and the upper surface well greased with lard or dripping. It should be placed on the fire so as to slant down towards the hand of the cook. The "Sprat" gridiron is double, folding together like waffle-irons; it is useful in broiling steaks when the fire is low.

GRILLING. (*See* BROILING.)

GROCERIES.—In the purchase of groceries at a retail shop it does not appear that any advantage in price is obtained by laying in large stores at once, though the practice may, under some circumstances, be convenient. The retail grocer is compelled by competition to put the lowest price he can afford on his goods to ready-money customers; and only those requiring credit have to pay high prices. In purchasing from the wholesale dealer, a housekeeper may occasionally gain some advantage; but to do so uniformly would not be desirable for either buyer or seller. A quick consumption of the finer articles of grocery is necessary, especially of those with aromatic qualities which exposure to the air dissipates. Family stores, which are slowly consumed, are daily deteriorating in quality; excepting only some few articles which are supposed to improve by keeping. By purchasing in small quantities as needed, from the retail dealer, this inconvenience is avoided. The different articles of grocery are treated of in their respective places.

GROG.—A mixture of rum and water, drunk cold, without any sugar. *Hot grog* is a name often applied to rum punch.

GROUSE.—The only species of grouse sufficiently numerous in this country to enter largely into diet is the pinnated grouse or "prairie-hen" as it is generally called. This is one of the finest of the game-birds, and is somewhat the color, form, and size of the partridge which it also resembles in flavor. Prairie-hens are very abundant throughout the Western States, and especially on the prairies, and are sent to all the Eastern markets in great numbers. They begin to arrive in October, and continue until April; usually brought in barrels and other packages in a frozen state. Their flesh is dark, but from a fat young bird it is excellent eating and highly nutritious. In purchasing, select the heaviest, and at the same time try the feathers around the vent; if they pull out easily the bird is apt to be too stale. The nose must also be brought into requisition to detect the least unpleasant smell. An old prairie-hen has a white bill and bluish legs; when young the bill is of a dark gray color, and the legs are yellowish.

Baked Prairie-hen.—Clean and prepare the bird as directed for chicken. Truss like chicken, grease the fleshy portions with a piece of salt pork or with lard, and place it on its back in the baking-pan, in which a tablespoonful of butter has been melted; set it in a quick oven, baste often, and serve when rather underdone. Mix some lemon-juice with the gravy, and turn it over the bird before serving.

Broiled Prairie-hen.—Clean and prepare as for baking, and then split the bird down the

breast so as to open it; butter all over, inside and out, and sprinkle on a little salt and pepper; place it on the gridiron over a good fire, breast downwards; turn it over three or four times; serve it as soon as it has turned a nice brown.

Fricasseed Prairie-hen.—Prepare, cook and serve like chicken in *fricassee.*

Roast Prairie-hen.—Truss in the same way as for roast chicken, grease the fleshy portions with a bit of salt pork, and roast about half an hour at a clear, brisk fire, keeping it basted almost without intermission. Serve on buttered toast which has been laid under it in the pan for ten minutes, or with gravy and bread-sauce only.

Salmi of Prairie-hen.—This is an excellent way of serving the remains of roasted game; but when a choice *salmi* is desired, the birds must be scarcely more than half roasted for it. In either case cut them up neatly, and strip every particle of fat and skin from the legs, wings, and breasts; bruise the bodies well, and put them with the skin and other trimmings into a stew-pan; add two or three sliced eschalots, a small blade of mace, and a few pepper corns; then pour in a pint or more of good veal gravy or strong broth, and boil it briskly until reduced nearly half; strain the gravy, pressing the bones well to obtain all the flavor, skim off the fat, add a little cayenne and lemon-juice, heat the birds very gradually in it without allowing it to boil; place bits of fried bread round a dish, arrange the birds in the centre, give the sauce a boil, and pour it over them. Partridges and other wild-fowl can be prepared in the same way.

Stewed Prairie-hen.—Put about an ounce of butter and two ounces of salt pork, cut into bits, into a sauce-pan, and set it on a quick fire; when the butter is melted, put the bird in, and brown it all around; then add four small onions, half a carrot in slices, salt, and pepper; stir till the onions and carrots are partly fried; then add a pint of good broth (or half a pint of broth and the same of white wine), and a bunch of sweet herbs; boil gently till done. Dish the bird, strain the gravy over it, and serve warm.

GRUEL.—This is one of the most important branches of "cookery for the sick," as it can be eaten and digested when every other kind of food is rejected by the stomach. Gruel can be made either very thick or very thin, and should be adapted to the invalid's taste in this respect. By the addition of a little spice, or wine, or brandy, it can also be made very toothsome and nutritious; but where gruel is prescribed by a physician, this must never be ventured upon without his express consent.

Barley Gruel.—Boil four ounces of pearl barley in two quarts of water till reduced about one half; then strain, and sweeten.

Common Gruel.—Mix three tablespoonfuls of Indian meal in enough cold water to make a thick paste; add by degrees a pint of boiling water, and half a teaspoonful (or less) of salt, and boil it ten minutes, stirring all the time.

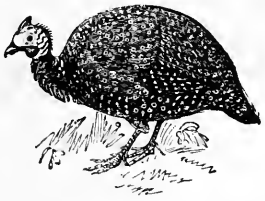
Oatmeal Gruel.—According to the thickness required, rub smooth in a bowl one or two tablespoonfuls of oatmeal with three tablespoonfuls of water; stir into this by degrees a pint of boiling water; set it on the fire in a sauce-pan and boil ten minutes, stirring all the while; then strain it into the bowl into which it is to be served. Gruel made in this way with milk instead of water is more nutritious; seasoned with salt and butter it is less insipid. If the doctor consents, a dessert-spoonful of brandy, or a tablespoonful of wine may be added.

Rice Gruel.—Put a tablespoonful of unground rice into a pint and a half of boiling water, with a stick of cinnamon or mace; strain it when boiled soft, add half a pint of milk and a teaspoonful of salt, and boil a few minutes longer. If *rice flour* is used, mix a tablespoonful of it smoothly, with three tablespoonfuls of cold water, and stir it into a quart of boiling water; let it boil five or six minutes, stirring constantly; season with salt and a little butter, and, if liked, add sugar and nutmeg to taste.

Water Gruel.—Make one gill of Indian meal and a heaping tablespoonful of wheat flour into a thick and smooth paste with cold water; stir it into two quarts of boiling water; let it boil slowly twenty minutes. Add salt, sugar and nutmeg to taste. Oatmeal may be used instead of the Indian meal in this receipt.

GUAVA.—There are several species of the guava, some of which are natives of Asia, some of America, and some common to both. The best of these is the white guava, which is abundant in the West Indies. The fruit of this species is rather larger than a hen's egg, smooth, yellow, and of a peculiar smell. The pulp is of a very agreeable taste, sweet and aromatic; it is used at dessert and preserved. *Guava jelly* comes from the West Indies, and is one of the most highly esteemed of conserves. It is excellent for giving strength and tone to the stomach after a spell of sickness, or when the digestion is out of order.

GUINEA-FOWL.—This bird is so called because first brought from Africa, where only



Guinea-Fowl.

it is wild in great abundance. Though domesticated in this country, Guinea-fowls still retain much of their wild nature, and are apt to wander. (*See* POULTRY.) They lay very abundantly, and the egg is excellent—more delicate

in flavor and more nutritious than that of the common fowl. The flesh is dark, like that of the prairie-hen, and many consider it more savory than the common fowl, though not so juicy. They are generally found unpicked in our markets, and by raising the feathers on the breast it can easily be seen whether they are fat and plump. A good fowl will weigh from three and a half to five pounds, the smaller ones are best for broiling and roasting. The guinea-fowl is considered best in the Winter months, taking the place of partridges after the latter are out of season. Cook and serve them like GROUSE.

GUMBO.–A slang term applied in Louisiana to the vegetable Okra, and now generally used to describe okra soup. (*See* SOUP.)

GUM-BOIL should be let alone unless *very* troublesome, when *see* **Ulcerated Teeth** under TEETH.

GUTTA-PERCHA.—This resembles India-rubber in composition and in resistance to the action of chemical agents; but it has not the same elasticity, and it is much harder at the ordinary temperature. It is dissolved in naphtha and melted by heat, and can be moulded, when warm, into any shape. In this way it is made to take the variety of forms now so common, as picture-frames, ink-stands, dolls, combs, buttons, and numerous household utensils. Articles made of gutta-percha should never be exposed to a high temperature.

GUTTERS.—Great attention should be paid to the gutters on the roof of a house, not only in their first construction, but in seeing that they are kept in proper repair, otherwise the water will penetrate and injure the apartments. All metal gutters must have a small degree of slope, so as to give the water a current, which, particularly in those of considerable length, increases the width of the gutter at one end, and, therefore, requires a greater quantity of metal. Builders, to avoid expense, are apt to make this slope too small. The sheets ought never to be joined by solder, because, if confined, the expansion in warm weather will cause the metal to crack; but they should be connected by *drips*—a kind of step of two inches, made in laying the boards for the metal. The metal over this is only hammered close, and not soldered. With the same object of saving metal, builders often make this step too little; and, when this is the case, the snow, in thawing, is liable to rise up in the joint and damage the ceilings. When wet appears in the ceiling of the upper story of a house it is generally owing to one of these circumstances having been neglected, or, perhaps, to some crack in the gutter. The whole should therefore be carefully examined by a plumber; but if the defect arises from the metal of the gutter having been cut too narrow originally, there is no effectual remedy but taking it up and putting down wider metal.

Gutters are now frequently made of tin, but this is a frail material, especially for large roofs, and is very likely to rust through in a few years. Gutters should always be cleaned out at regular intervals, as much damage is caused occasionally by overflows arising from an accumulation of dirt, which prevents the gutter from draining the roof. During our Northern winters gutters are often frozen just where they enter the ground. In such cases pour boiling water on the outside till the obstruction is melted out, or throw in salt.

H

HADDOCK.—The haddock is a smaller fish than the cod, which it resembles a good deal in every other respect. The flesh, however, is more watery and the flavor inferior. The average size is not more than two or three

Haddock.

pounds, but sometimes they reach a much greater weight. They are at their best in November and December, and again in June and July. They are better for being hung up for a day or two, with a sprinkling of salt. When large, haddock is dressed in the same way as cod, and takes an equal time to cook. Small haddock may be either boiled or fried. They scarcely hold together well enough to stand broiling without considerable trouble.

Fried Haddock.—Cut the fish in pieces of the proper size for serving; wash and wipe them dry, and roll in Indian meal. Fry some pieces of salt pork; take out the pork and put a little lard into the frying-pan; when it is boiling hot put in the fish, and fry it to a light brown. Dish it with the fried pork, and serve with drawn butter.

HAGGIS.—A favorite dish in Scotland, made by boiling a sheep or calf's liver, heart, etc., for several hours, mincing them up fine, mixing this mincemeat with scorched oatmeal, onions, a small quantity of beef suet, salt, pepper, and some strong broth or gravy, and putting the whole into a sheep's paunch or stomach, carefully tied at both ends, and of which the mixture fills about two-thirds, the rest of the space being left for the expansion of the steam generated by the boiling to which it is subjected for three or four hours. Haggis

is very savory to the nostrils when freshly cooked, but it requires a very strong stomach to digest it without reproach or inconvenience.

HAIR.—The proper management of the hair is very simple. It should be kept as clean as possible by daily brushing with a stiff brush, by removal of the scurf that forms upon the skin (*see* DANDRUFF), and by occasionally washing it with pure, cold water, which will have no injurious effect upon the health, provided the hair is not so long as to make its drying difficult. To assist in drying it thoroughly, dip the brush into a very little hair-powder or starch, brush it into the hair and then brush it out. After this a little perfumed pomatum may be brushed in—too much not only makes the hair greasy, but injures it. There is a natural oil secreted by the hair which ought to be sufficient for keeping it in good order, but this is often deficient, and the hair becomes dry and harsh; then it is that the deficiency may be supplied by a little pomatum or oil. A multitude of hair oils are sold by perfumers, their compositions being kept secret, and each being represented as having extraordinary qualities. It is best to have nothing to do with any of them, for when they are not injurious they are no better than preparations which can be made at home with little trouble, and for which we shall give a receipt or two, further along. When hair has become too greasy from too free use of oil or pomatum, it is proper to remove the unctuous matter by persistent brushing. Occasionally soap is resorted to for this purpose, but soap will change the color of the hair, and should be used cautiously. A little white soap dissolved in spirits of wine is most effectual and less injurious than soap alone. After using it the hair must be well washed with water.

It is very doubtful whether frequent cutting of the hair is favorable to its growth and beauty, as is generally assumed. It always renders the hair coarse and stubby, and it is certain that the common practice of cropping or shaving the head, for the purpose of strengthening the growth of the hair, not only fails of this effect, but often produces total baldness.

The loosening and falling out of the hair is frequently the direct result of fever or derangement of the system, but is more often the consequence of weakness of the nervous power. It may be checked by improvement of the general health and the use of proper local remedies. A useful practice, when the hair is sufficiently short, is to plunge the head into cold water every morning and night, and, after thoroughly drying, to brush it briskly until the scalp is warmed to a glow. A simple lotion, composed of 2 drachms of Tincture of Cantharides, 6 drachms of essence of Rosemary and 11 ounces of elder-flower water may be effectively employed as a tonic. In cases of baldness the scalp may be advantageously shaved and the secretion of the hair stimulated by dry friction, tonic lotions (rum, for example), and by a stimulating diet. There is a premature grayness which sometimes occurs in the young, chiefly in those of light complexion and light-colored hair. It comes from the same causes as the loosening or falling out of the hair.

Dyeing the hair is the most absurd of all attempts at human deceit, since it never is successful, and deceives no one but the deceiver himself. The practice is generally begun with the idea that a single application will be sufficient for all time; but the dye only discolors that portion of the hair above the surface of the scalp. The new growth, which is constantly taking place from the roots, appears always with the natural tint. Moreover, there is no dye which does not injure the hair itself; and many of them—those containing lead or arsenic—tend to paralyze the brain and nervous system.

To remove superfluous hair, *see* DEPILATORY.

Castor-Oil Pomatum.—Take tube-rose pomatum, one pound; castor oil, half a pound; otto of bergamot, one ounce. Melt these together; then beat up with a whisk or spoon for half an hour or more, as the grease cools. Minute particles of air are inclosed by the pomatum when prepared in this way, and render it light and spongy.

Hair Grease.—**I.** Melt half a pound of lard and six ounces of olive oil in a jar placed in hot water; when nearly cool add about two drachms of essence of lemon, oil of lavender, or any other perfume, and then pour it into glass bottles, or earthen pots.

II. Mix fresh beef marrow and clear neats-foot oil in equal proportions; melt as before and decant, leaving the dregs behind; after which, when nearly cool, the scent is to be added as above, and the whole stirred till quite firm.

Hair Tonic.—An excellent tonic to prevent the hair from falling off may be made as follows:—Spirit of turpentine and neats-foot oil, of each one ounce; active solution of cantharides, thirty drops: mix. Apply to the roots of the hair two or three times a week.

Hair Wash.—A most excellent hair wash, which cleanses the scalp, and at the same time softens and promotes the growth of the hair, can be put up by any druggist from the following prescription, which should be copied out and given to him: Rose-water, 7 oz; aromatic spirits of ammonia, 1 oz; tincture of cantharides, 1½ drachms; glycerine, ½ oz. Mix and shake before using; apply to the scalp with an old tooth-brush.

HAIR CLOTH.—This is made of the long hair taken from horses' tails, and is extensively used for covering chairs, sofas, etc., and for making sieves. It is very durable, not being liable to decay through ordinary causes. It is insoluble in water, but is acted upon and dissolved by alkalies; much soap, of course, injures it. A little salt may be added to the water with which it is washed.

HAKE.—These fish (called also "Stock-

fish") are occasionally taken with the cod and haddock, and seem of their species; but are longer, with a tapering, cylindrical body. In season from June to September. Their flesh is sweet and tender, but a little dry. Prepared, cooked and served in all respects like cod.

HALIBUT.—In season throughout the year. On the fish-stands it is usually cut as wanted. The thick portions are best for steaks

Halibut.

and stews; but the nape or thin flank part is an excellent piece for broiling, being usually fat and juicy. The flesh is pearly white and very nutritious; that taken from a fish weighing from fifty to seventy-five pounds is the best. The very large fish is coarse-grained dry and tasteless; that of a yellowish tint, without the pearly brightness, is apt to be rank and unwholesome. Halibut is also found in a cured state—pickled, salted and smoked, and by many is considered superior to cod.

Baked Halibut.—The part next to the tail-piece is considered best. Wash it nicely and lay in salt and water for a couple of hours before cooking; wipe dry, and score the outer skin; bake in a moderately hot oven, basting often with butter and water heated together in a tin cup. A piece weighing six pounds will require an hour for baking; when a fork will penetrate it easily it is done. Serve with a sauce made of the gravy left in baking it, a tablespoonful of walnut catsup, a teaspoonful of Worcestershire sauce, and the juice of lemon, thickened with browned flour, and boiled up once.

Boiled Halibut.—Lay it in cold water, well salted, for two hours; wash and scrape clean; lay it in the fish-kettle, cover with boiling water, well salted; 1 onion, a bouquet of parsley, 1 blade mace, 1 sprig thyme, ¼ carrot, 6 peppercorns; skim; set where it will simmer; dish on a napkin; sauce in tureen.

Broiled Halibut.—The nape or thin flank is best for broiling. Soak in salt water for two hours; then wash it and wipe it dry; sprinkle a little flour over it; put the outside to the fire first, and broil slowly for half an hour. When it is dished, spread a little butter over it, and sprinkle pepper on.

Fried Halibut.—Cut into slices half an inch thick, shake some flour over them, or dip them in egg and roll in bread-crumbs, and fry them in butter or sweet oil to a crisp brown.

Steak (Halibut).—The receipt for frying halibut steaks is given above, but it is best to broil them on a buttered gridiron over a clear fire, first seasoning them with salt and pepper. When dished, butter well, cover closely, and serve hot.

HAM.—The best hams, whether corned or cured and smoked, are those from eight to fifteen pounds in weight, having a thin skin, solid fat, and a small, short, tapering leg or shank. In selecting them, run a knife along the bone on the fleshy side; if it comes out clean the ham is good, but if the knife is smeared, it is spoilt.

To *cure* hams, rub the meat side well with fine salt, when perfectly cool, and lay them in a clean cask for a couple of days. Then, to every hundred pounds of meat, take eight pounds of ground rock-salt, two ounces of saltpetre or saleratus (saleratus is best), two pounds of sugar, one and a half ounces of potash, and four gallons of water; mix these well together until quite dissolved, then skim the mixture and pour it over the meat. Some boil this pickle, and when cool pour it over the meat. Let the hams remain in this brine for about six weeks; after which, take them out, soak them in cold water four or five hours, and then hang them up to dry for two days, when they will be ready for the smoke-house. Hang them hock end downwards, and smoke them about four weeks; then take them down, examine closely, and if there is a suspicion of insects lay them in the hot sun for a day or two.

There are innumerable ways of *keeping* hams after they are cured; the best and easiest is to wrap them snugly in brown paper, lay them in a box, and fill this up with wood ashes. They may be kept sweet and tender for twenty years by this simple method. *Slaked* ashes are best, as they will not act on the meat, even when they come in contact with it. Another good plan is to wrap them in paper, sew them up in coarse cotton bags, whitewashed on the outside, and hang them near the roof in a garret.

Baked Ham.—Soak over night, in cold water; trim away the rusty part from the under side and edges, wipe dry, and cover the bottom with a paste made of flour and hot water; lay it upside down in the baking-pan, with enough water to keep it from burning, and bake till done—allowing twenty-five minutes to a pound. Baste now and then, to prevent the crust from scaling off.

Boiled Ham.—Soak over night, and in the morning wash hard with a coarse cloth or stiff brush; put on the fire in cold water, and boil a common-sized ham four or five hours—allowing a quarter of an hour to a pound; then skin it, and set it in the oven for half an hour; then cover it thickly with fine bread-crumbs, and set it back in the oven for half an hour.

Broiled Ham.—Cut the ham in thin slices, and broil quickly over a brisk fire; then spread on some butter shake a little pepper over it; and add a spoonful or two of vinegar.

Eggs with Ham.—Fry the ham as directed, having the slices as nearly as possible of a uniform size suitable for serving. Break the eggs carefully, and drop them one at a time into the hot fat; have a large pan for this purpose

so that they will not touch. Fry them until the white is set, then lift them out without breaking, and lay one on each slice of ham, which should have been kept hot meanwhile. Serve at once, without the gravy.

Fried Ham.—Cut as for broiling, soak the slices for half an hour in hot water, and fry briskly over a hot fire. Remove the meat, add a little cream to the gravy and thicken with flour, boil up once and turn over the ham. Or serve the ham without gravy, as some prefer it thus.

Glazed Ham.—Take a cold boiled ham, from which the skin has been removed, and brush it all over with beaten egg. To a cup of powdered cracker allow enough rich milk or cream to make into a thick paste, salt, and work in a teaspoonful of butter; spread this evenly a quarter of an inch thick over the ham, and brown in a moderate oven.

Grated Ham.—Take the lean parts of cold boiled ham, and grate it up like cheese; keep in a stone jar. This makes excellent sandwiches, and seasoning, or may be eaten so.

Potted Ham.—Take a pound of cold boiled ham (lean only), which should be weighed after every morsel of skin and fibre has been removed; and six ounces of cold roast veal prepared with equal nicety. Mince these as fine as possible with a sharp knife, taking care to *cut* through the meat, and not to tear the fibre, as on this much of the excellence of the preparation depends. Next put it into a mortar and pound it to a smooth paste with eight ounces of butter, which must be added gradually. When beaten smooth, add a teaspoonful of freshly-pounded mace, half a large or the whole of a small nutmeg, and the third of a teaspoonful of cayenne well mixed together. After the spice is added, keep the meat turned from the sides to the middle of the mortar, so that it may be seasoned equally in every part. When perfectly mixed, press it into small potting-pans, and pour melted butter (lukewarm, not hot) over the top. If kept in a cool and dry place, this meat will remain good for a fortnight or more.

Roast Ham.—Soak the ham for twenty-four hours and then wash it hard with a coarse cloth or stiff brush. Spit it like a fowl; set it before a moderate fire and roast about two hours; then take it up on a dish and peel off the rind; scrape all the fat out of the roaster, and put the ham to the fire to roast about two hours longer, basting it frequently in the same way as beef. To make the gravy, put the dripping from the roaster into a sauce-pan, add a teaspoonful of water, and a little flour, and give it one boil; serve in a sauce-boat. This is an excellent method of cooking a ham.

Steamed Ham.—This is by far the best way of cooking a ham—especially if the "Warren's Patent Steam Cooker," which really prevents all contact either with the fire or with the water, be used. Prepare the ham as for boiling; keep the water under the steamer at a hard boil, and allow twenty minutes to a pound for the cooking. When done, brown slightly in the baking-oven.

HAND.—Such excessive care is now bestowed upon the hands by some persons, that it would seem as if it was not supposed that they were made to be used; nevertheless, it is essential in good society to have them in good condition. When any sort of work is to be done which will injure them, it is best to wear gloves. Further than that, and washing them frequently with soap and water, and a soft brush, more attention is not necessary, except in the case of the nails (*see* FINGER-NAIL). Few things are more injurious to the beauty and usefulness of the hands than the practice of wearing tight gloves. Kid gloves, as generally worn by ladies, are not only extremely uncomfortable, especially in cold weather. but they permanently deform the hand by destroying its proportion; and nothing could be uglier. Artists have such a horror of them that they avail themselves of every pretext to keep them out of the pictures of their female sitters.

There is a not uncommon affection of the hands which is a serious annoyance to those afflicted with it. This is a moist condition, which resists all the ordinary efforts of absorption. Such hands are so constantly humid that everything they wear or touch becomes saturated; the glove shows the effect at once in ugly stains, and the bare hand leaves a blur of dampness on every surface with which it may come in contact. This infirmity is not seldom constitutional, and though difficult of eradication, may be gently relieved by whatever tends to strengthen the constitution and invigorate the body. Exercise in the open air, cold bathing. a generous but not too stimulating diet, and a daily draught of some mineral water or medicine containing iron, are the best general means of treatment. The most effective local applications are the juice of the lemon and starch powder.

The practice of "snapping the knuckles," as it is called, is fatal to the beauty of the fingers. It stretches and weakens the ligaments, and so enlarges the knuckles and joints that the whole hand becomes knotty and of a very unsightly appearance.

HARE.—No genuine hares have been found in the United States except in California. Those in the Eastern markets come either from Canada or Europe. The Canadian hares are very inferior in quality, and when old are tough, dry, and insipid; the leveret, or young one, when in good condition, is very fair eating, though not so good as the rabbit. They are found in the markets during November, December, and January, but are good until March. The *Gray hare*, as it is called, is not a hare but a rabbit. (*See* RABBIT.)

Fried, or Fricasseed Hare. — Same as CHICKEN.

Roast Hare (*English Receipt*).—After the hare has been skinned, wash it thoroughly in cold water, and afterwards in warm. If in any degree spoilt or musty on the outside, use vinegar or the pyroligneous acid, well diluted, to render it sweet; then wash it again in

clean water, that it may retain no taste of the acid. Pierce with the point of a knife any parts in which the blood appears to have settled, and soak them in tepid water, that it may be well drawn out. Wipe the hare dry, fill it with forcemeat, made according to taste, sew it up, truss and spit it firmly; baste it for the first ten minutes with lukewarm water containing a little salt; throw this away, and put into the pan a quart of new milk; ladle it continually over the hare until it is nearly dried up, then add a large lump of butter; continue the basting steadily until the hare is well browned; for, unless this be done, and the roast kept at a proper distance from the fire, the outside will become so dry and hard as to be quite uneatable. Serve the hare with good brown gravy (of which a little should be poured round it on the dish), and with red currant jelly. This is an improved English method of dressing hare, but we would recommend in preference that it should be basted plentifully with butter or beef-drippings from the beginning, and that the salt and water should be altogether omitted. It takes from an hour to an hour and a half to roast a hare.

Stewed Hare.—Wash and soak the hare thoroughly, wipe it perfectly dry, cut it down into joints, dividing the largest; flour these, and brown them slightly in butter with some bits of lean ham; pour to them by degrees a pint and a half of gravy, and stew very gently from an hour and a half to two hours; when it is about one-third done add the very thin rind of half a lemon, and ten minutes before it is served stir to it a large dessert-spoonful of rice-flour, smoothly mixed with two tablespoonfuls of mushroom catsup, a quarter teaspoonful of mace, and a small pinch of cayenne. This is an excellent plain recipe for stewing a hare; but the dish may be enlivened with forcemeat, rolled into small balls and simmered for ten minutes in the stew, or fried and added to it after it is dished.

HARTSHORN. (*See* AMMONIA.)

HAZLENUT.—These are also called *wild filberts*. They are of almost the same shape and color as the filbert, but smaller, with a thicker shell, and better flavored. They grow in clusters on bushes along the borders of woods and fences; the husks are frizzled, and when they begin to open and show the end of the nut, then the nuts are fit to eat. Hazlenuts usually appear in the markets in August and September.

HEADACHE.—There are so many causes of headache, that it is impossible to make any suggestions which will invariably apply. The great majority of cases arise from indigestion. Then there is apt to be a feeling of nausea; the tongue is white, and the mouth parched and clammy. The remedy is a dose of some aperient medicine, and such attention to diet subsequently as will keep the bowels in good order. (*See* INDIGESTION.) Intense headache proceeding from no apparent cause is an indication either of nervous irritation or nervous exhaustion, and the most effective cure is rest and perfect quiet. Many persons experience relief from Guarana, the product of the Paullinia sorbilis, either as a powder or an elixir. With the first symptoms of headache, a teaspoonful of the latter or fifteen grains of the former should be taken and repeated at half hour intervals until three doses have been swallowed. More is unnecessary. The elixir Gelsemirens compound just introduced by F. V. Rushton, of New York, has also made some wonderful cures. Directions accompany it. Habitual sufferers from headache would do well to try these remedies. Bandages, saturated with vinegar, and applied to the temples and forehead, will often give great relief; or, moisten a linen rag with sulphuric ether, apply it to the forehead, and prevent evaporation by covering it with a piece of oiled silk. When headache arises from an overloaded condition of the blood-vessels of the brain, there is usually a bloated countenance, a full red eye, with a dull, inanimate expression. Cold applications to the head, and leeches to the temple, or cupping on the back of the neck, and 30-gr. doses of bromide of potassium are the proper means to be adopted in this case. In rheumatic headache the pain is of an intermittent, shifting nature, shooting from point to point, and is felt most at night when the patient is warm in bed. For treatment, *see* RHEUMATISM.

HEAD-CHEESE.—*Take*: Pig's head, feet and ears, 7 lbs; salt, 1 teaspoonful; black pepper, ½ teaspoonful; cayenne, ½ teaspoonful; mace, ½ teaspoonful; a small onion minced fine.

Put on the meat in enough cold water to cover it, and boil till the meat is ready to drop from the bones; remove these, and chop the meat up fine while it is hot; add the seasonings to the liquor, mix the meat in, and while hot tie all in a strong bag, and keep a heavy stone upon it until quite cold. A tin mould in the shape of a boar's head, will give a fine appearance to the cheese; the mould should be wetted with cold water and the cheese poured in hot.

HEALTH.—A moment's reflection will show how wide is the subject of health, for it not only embraces the structures and functions of the body, but all the influences which act upon it from without. To cover it with anything like completeness would require a treatise on physiology and hygiene, and would be out of place of course in a book like this; but there are certain essentials to the preservation of health, of which every housekeeper, at least, both can and should have practical knowledge, and these are treated of in the articles on AIR, BATHS, CLOTHING, DIET, DIGESTION, EXERCISE, HOUSE, SLEEP, VENTILATION and WARMING. Attention to the principles laid down in these various articles will ensure good health so far as it is dependent upon bodily conditions; and any declension from it into actual disease is treated

of under the various diseases. There is such intimate connection, however, between the body and mind, that the health of one cannot be preserved without a proper care of the other. It is from a neglect of this principle that some of the most exemplary persons in the world suffer a thousand mental agonies from a diseased state of the body, while others ruin the health of the body by neglecting the proper care of the mind. One of the most common mental causes of ill-health is the excessive exercise of intellect and feelings. Mental occupation, and in a variety of forms, is not only healthful, but necessary, as Dr. Combe says: "Inactivity of the intellect and of feeling is a very frequent predisposing cause of every form of nervous disease. But mental work, like bodily work, must be done within wise limitations, and must neither be excessive in amount nor monotonous in kind." General remarks of this character, however, though their importance may be recognized, are seldom of any practical use; and we will close by quoting a paragraph from Dr. Edward Smith's treatise on "Health." According to him the "cardinal rules of health" for students and brain workers—for all workers in fact—are:

(1.) Work in the early, rather than in the later part of the day, and do not rob yourself of sleep before midnight. (2.) Alternate your mental work with bodily recreation, and make as much use of the latter as the time will allow. Gymnastics which expand the chest, singing, shouting, running, jumping and walking are proper kinds of relaxation. (3.) Limit your mental toil to that number of hours which will enable you to work well with the mind, and to obtain proper recreation for it and the body.

HEARTBURN. (*See* DYSPEPSIA.)

HEARTH (*To clean*). (*See* CLEANING.)

HEATING. (*See* WARMING.)

HELIOTROPE. — This is an excellent plant, either for indoor or garden culture, being delightfully fragrant, and giving a plentiful supply of flowers from June to October. Plants of any of the numerous varieties can be procured of the florists, and after that it is propagated from cuttings with great ease. A cutting the first year will grow very rank, but if cut back and pruned into one stem it becomes woody, and will make a fine shrub. The heliotrope is generally seen as a low bush, but it makes a very fine standard, if trained on a single stem, from one to four feet high, with a head several feet in diameter. Train the main stem of the plant to a trellis, or against the fence, and let the branches drop naturally, as they will gracefully. The plant bears the knife well, and breaks freely, so it can be trained to any shape. The older the plant the more profuse are its clusters of fragrant flowers. In the garden the heliotrope will grow vigorously if planted in the early Spring in any kind of rich, loamy soil. In pot-culture the soil should be strong loam, with a little sand and manure. It should have frequent re-pottings, and be allowed to grow large.

The florists' catalogues contain many varieties of the heliotrope. The following are among the best: *Beauty of the Boudoir*, dark; *Duc de Lavendry*, rich blue, with a dark eye; *Etoile de Marseilles*, deep violet, with white centre; *Flore*, violet, light centre; *Garibaldi*, nearly white; *Incomparable*, bluish lilac; *Jean Mesmer*, light bluish; *La Petite Negress*, very dark, dwarf; *Leopold 1st*, deep violet blue; *Madame Farilon*, violet tint; *Malulatie*, delicate lilac; *Miss Nightingale*, deep violet; *Reine des Heliotropes*, violet and lilac.

HEMORRHAGE. (*See* BLEEDING.)

HEMP.—A plant, the fibres of which are coarser and stronger than those of flax. It grows well in any soil which has a rich, loamy surface and good under-drainage; but, though there are many portions of the Western States exactly adapted to its culture, by far the larger part is imported from Russia. It is used for making sail-cloth, and a kind of coarse canvas adapted for common clothing, tents, bags, etc., and also in making cords, twine and ropes. *Buckram* is a kind of coarse hempen cloth, woven very open, and stiffened with gum. The sap of the hemp plant contains a resinous substance which is a very powerful narcotic, and is much used in medicine. The extract made in India and imported has been found to be much stronger than that made in this country.

HENBANE.—The common henbane is a native of Europe, and grows on waste grounds, banks and commons. Two varieties, the *annual* and the *biennial*, are cultivated here, the latter being generally regarded as the most active in its properties. The henbane is glandular and viscid, and exhales a peculiar and disgusting odor. The entire plant possesses narcotic properties, and has been employed medicinally from the earliest times as a narcotic, anodyne, and soporific. It is sometimes used by oculists in place of belladonna to dilate the pupil. When swallowed in sufficient quantity, it is said to cause loss of speech, disturbance of vision, distortion of face, coma, delirium, and paralysis. *No antidote is known*, but powerful emetics may be given if an overdose is suspected. The leaves only are used in regular practice. They are given internally in the form of powders, or in extract or tincture, and applied externally in fomentations and cataplasms. It should never be used in any way, except under medical advice. The fumes of the seeds of henbane, heated in the bowl of a tobacco-pipe, and inhaled, are said to allay the toothache.

HEPATICA.—Popularly known as "Squirrel Cups." This is a hardy, herbaceous plant, and is the first of the Spring flowers to open after the snow-drop and crocus, usually expanding about the first week in April. The leaves are evergreen and the flowers double and single, white, blue, rose and red, and very profuse in bloom. The plant may be raised from seeds (plant in the Autumn or in the very early Spring), or obtained ready started from

the florist. It flourishes best in a moderately rich, loamy soil, and in sunny spots of the garden. Some of the double varieties are among the most desirable flowers for forcing, a pot of any of them being a mass of bloom for several weeks.

HERBS.—The vegetables comprising the group of what are called "sweet herbs" are not eaten as a dish by themselves, but enter into other dishes as seasoning, flavor, etc., and are also used to some extent in perfumery. Those usually employed in cookery in this country are *balm*, *basil*, *fennel*, *lavender*, *marjorum*, *mint*, *parsley*, *rosemary*, *sage*, *tansy*, *tarragon* and *thyme*. Each of them is treated of in its appropriate place, and we shall only make room here for a few suggestions about gathering and preserving them. Sweet herbs that are to be dried for use should be gathered early in the morning at the season when they are just beginning to flower. The dust should be washed or brushed off them, and they should then be dried by a gentle heat as quickly as possible. The stalks should be picked out and thrown away and the leaves and small twigs put into corked, large-mouth bottles, or tin boxes closely covered. When dried and pressed into cakes, and wrapped in paper (the form in which they are usually sold in the stores), herbs may be kept two or three years; but when hung up in loose bundles, they soon lose their flavor.

Drinks (Herb).—Balm tea is often relished by the sick, and sage, and pennyroyal, and tansy tea have excellent medicinal effects. Balm, sage and sorrel, mixed in equal proportions with sliced lemon, and boiling water poured on, and then sweetened, is a fine drink. Herb drinks must be made in small quantities and renewed often, as they become insipid by standing.

Mixture (Herb).—For general cooking purposes the following is a good mixture: Equal proportions of sweet marjorum and winter savory, with half the quantity of basil, thyme and tarragon. Rub to a powder, mixing well together, and keep in a bottle closely corked.

Powder (Herb).—Take equal quantities of dried parsley, savory, sweet marjorum, and thyme; half the quantity of basil, and a few drops of essence of lemon; warm them in a moderately hot oven, and pound them in a mortar; sift the powder and keep it closely stopped. This is useful to flavor sauces, soups, and forcemeats, but the flavor of fresh herbs is finer.

HERNIA.—A general term applied to any protrusion of any inner organ, or intestine, from its natural cavity. In a more restricted sense, however, and as generally used, the word only signifies a protrusion of the abdominal viscera. Children and old people are most liable to this disease. In the former it is generally caused by excessive crying, coughing, vomiting and the like; in the latter it usually results from blows or violent exertions of the strength, as leaping, carrying heavy weights, etc. In both, a relaxed habit, indolence, and an oily diet, dispose the body to the disease. A rupture sometimes proves fatal before it is discovered. Whenever sickness, vomiting, or obstinate costiveness gives reason to suspect an obstruction of the bowels, all those places where ruptures usually happen (the *umbilicus* and the *inguinal* and *femoral canals*), ought to be carefully examined. The protrusion of a very small part of the intestines will occasion all these symptoms, and, if not returned in due time, may prove fatal.

Treatment.—On the first appearance of rupture in an infant, it ought to be laid upon its back with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking plaster may be put on over the part, and a proper truss or bandage must be constantly worn for a considerable time. The child must, as far as possible, be kept from crying and from all violent exertions, until the rupture is cured.

In adults, when the intestine has been forced down with great violence, or happens from any cause to be inflamed, there is often great difficulty in returning it, and sometimes the thing is quite impracticable without a surgical operation—a description of which is foreign to our purpose. When the rapture is discovered, lay the patient on his back, with his head very low, and his back raised high with pillows. In this situation, flannel cloths wrung out in a decoction of camomile flowers, or simply in warm water, must be applied for a considerable time. If these should not prove successful, recourse must be had to pressure. If the tumor be very hard, considerable force will be necessary; but it is not force alone which succeeds here. The operator, at the same time he makes a pressure with the palms of his hands, must with his fingers artfully conduct the intestine in by the same aperture through which it came out. There is reason to believe that by persisting in the use of these, and such other means as the circumstances of the case may suggest, most *hernias* ought to be cured without an operation, Sometimes, however, the surgeon's help is the only chance, and must be sought without delay. An adult, after his intestine has been returned, must wear a proper truss. Such bandages are generally annoying to the wearer at first, but by custom they become quite easy. No person who has had a rupture after arriving at man's estate should be without one of these trusses. Persons who have a rapture ought carefully to avoid all violent exercise, such as leaping, running, and the like; they should abstain from strong liquors, and should guard carefully against catching cold.

HERRING.—There are five or six different species of fish which pass in our market under this name; but only one is abundant, and that is the common herring (known as "white herring" in England), which is caught in vast numbers on our coasts and passes into commerce as salted or smoked herring. Herrings may

be obtained in a fresh state during the months of February, March, and April; their usual weight is almost half a pound. *Red herring* derive their appellation from the brownish, red color given to them by smoke after they have been salted. As food, fresh herring, though rather oily, are healthful, if used moderately. Red herrings are less a food than a luxury; they excite thirst, and tend to create fever.

Broiled Herring.—Cut off the tip of their heads immediately behind the eyes; split down the back; remove the bone and entrails; lay on a deep dish, with oil, vinegar, pepper and salt; turn often to absorb well the flavor of the marinade. Broil on a clear fire, and serve with Dutch sauce, separately in tureen.

Red Herrings.—I. This fish is rendered much more delicate by pouring boiling water on it before it is dressed, and leaving it to soak for half an hour or more, should it be highly dried. Cut off the heads and tails, open the herrings at the back, and warm them through before the fire or upon the gridiron. They may be rubbed with a bit of cold butter, and seasoned with a slight sprinkling of pepper or cayenne, when these are liked, or served quite plain.

II. Take off the heads, open the backs of the fish, and remove the backbones; soak the herrings for two or three hours in warm milk and water; drain and wipe them. Melt a teaspoonful of butter and mix it with the beaten yolks of two eggs and some savory herbs minced fine; dip the fish into this mixture and spread them thickly with fine bread-crumbs; broil them to a light brown over a moderate fire, and serve them on hot buttered toast, sprinkled with a little cayenne.

HICCOUGH. — This is generally called "hiccup." It is a spasmodic or convulsive affection of the diaphragm, often arising from some cause that irritates the nerves of the stomach. It may come from excess in eating or drinking, from external injury to the stomach, from poison, from inflammation or tumors in the stomach or any of the viscera. In gangrenes, and acute and malignant fevers, a hiccough is often the forerunner of death. The common hiccough may generally be removed by drinking off a glass of cold water rapidly, or by taking a pinch of snuff or anything that will cause sneezing; quite troublesome cases are frequently cured by swallowing quickly a glass of strong soda water in a state of brisk effervescence. When the hiccough proceeds from indigestion, a draught of generous wine or of any spirituous liquor will generally remove it. When a sick person has the hiccoughs, and a sudden ejaculation or diversion of the patient's mind fails to remove it, give twenty drops of sal-volatile and fifteen drops of ether in a wineglass of camphor-water; or in severe cases, give thirty drops of laudanum.

HICKORY-NUTS.—There are several varieties of hickory-nuts, which are very different from each other in quality, and it requires some knowledge to select the best. Those known as "shell-barks" or "shag-barks" are the choicest. They grow in shaggy-bodied trees, are flatter than the ordinary kind, have a thin shell, easily cracked, and a full kernel of large, proportionate size. They ripen in October, and are found in market all winter. The next best kind are the "mocker-nuts" or thick-shelled hickories. These are both larger and rounder than the shag-barks, and have a very thick shell, with a small but sweet kernel. The "pig-nuts" are small, pear-shaped and smooth, and are very inferior—being sometimes unfit to eat. The "hog-nuts" or "swamp-hickories" are the poorest of all the varieties, the kernel being hard and bitter. All the varieties ripen in October.

HOARHOUND.—A perennial plant growing wild in many portions of the country, and also cultivated for its medicinal virtues. Large quantities of the parts used are gathered and prepared for the market, and may usually be obtained at the herb-stands and at drug stores. It has an aromatic smell and a bitter taste. A strong decoction of hoarhound, sweetened, and drunk cold, is excellent for coughs or weak lungs. The well-known *hoarhound candy* is good for the same purposes; dissolved slowly in the mouth and swallowed, it relieves that titillation in the throat which is one of the most irritating features of a cough, and also exerts a soothing influence. (*See* CANDY.)

HOARSENESS.—In general, hoarseness is a symptom of a severe cold, and may be removed by alleviating the latter. For a sudden hoarseness, where the throat alone seems to be affected, take a teaspoonful of sweet spirits of nitre in a wineglassful of water two or three times a day. When the voice has become hoarse by loud speaking, it may be restored usually by simply eating a piece of anchovy. Borax, however, as has recently been discovered, is the sovereign remedy for hoarseness of any kind. Dissolve a piece of the size of a pea slowly in the mouth, and swallow the saliva. The effect is like magic.

HOCK.—One of the favorites among the Rhenish wines. The true *Hock* is so called from the vineyards of Hochheim, a little town, not on the Rhine, but on the Maine, a few miles from its junction with the former river; but it is always classed with the Rhenish or Rhine wines, being of nearly the same excellence. With us, not only the wines made near Hochheim receive, in general, the name of Hock, but likewise those of the Rhine, the Maine, the Nabe, and even the Moselle: though the character of these sometimes varies considerably. Hock has all the characteristic qualities of the Rhine wines. When old, though generous and durable, it is considered as less heating, and more exhilarating than many other wines, and is consequently excellent for invalids requiring a stimulant. Drink a little cooler than the room.

HODGE-PODGE. — This is a genuine Scotch recipe:—Put as much water into a

large sauce-pan as will make two days' supply of soup for a family of six or eight, three hours before dinner; add two pounds of leg of beef, half a pound of dried peas, one dozen carrots cut in small pieces, and four onions, also minced; let this boil an hour and a half, and then add another half pound of peas and two pounds of mutton chops. When it has all boiled for three hours, take out the beef, and serve the hodge-podge with the mutton chops. It should be as thick as porridge nearly; a few beans and turnips can be added, but the turnips are apt to sour it; yet when peas are scarce and young, it is necessary to use turnips in order to make it thick enough. The dish is considered best the second day after making.

HOE-CAKE.—A kind of bread made of Indian meal, which is very popular in the South. Take a quart of Indian meal, and mix it with enough boiling water to make a thick batter; stir in two tablespoonfuls of butter and two teaspoonfuls of salt; turn it into a buttered pan, flatten to one-third of an inch, and bake half an hour in a moderate oven. Eat hot, with butter.

HOG. (*See* PORK.)

HOLLANDS. (*See* GIN.)

HOLLYHOCK.—This is a tall flowering plant, of the genus *Althea*, cultivated extensively in gardens. When grown amongst shrubs in situations moderately sheltered, few plants produce a finer floral display during the autumn months. The great drawback to its cultivation is the liability of the plants to get broken by the wind; but if secured when eighteen inches high, to suitable stakes, this can easily be obviated. Procure the plant from a florist (or raise from seed in a hot-bed), and set them out when all danger from frost is passed, say at the end of April. Give each plant a few spadefuls of rotten manure; press the earth firmly around the roots; and if the ground is dry, give a good watering. In due time, stake each plant, and as the stems advance in growth secure them to it with strong but soft cord or strips of cloth. Let only one stem rise from a plant, and nip out all the laterals as they appear. Never allow the plants to suffer from want of water; and as soon as flower-buds are formed, dig in a little more well-rotted manure. In most instances, two flower-buds will start from the axil of each leaf; nip out the smaller of the two, and in any case of crowding, thin to the requisite number.

HOMEOPATHY.—A system of medical practice, of which the fundamental principle is the treatment of diseases by the administration of such remedies as, when given to a healthy man, will produce, it is claimed, symptoms *similar* to those from which the patient is suffering. The magnitude of the dose has no connection with the principle ("like cures like,") but is determined, as in all modes of practice, by the circumstance of each case. It must be said, however, that in homeopathic practice much smaller doses are generally used than by the Regular School of physicians, on the theory that the remedies are claimed to act *specifically* and *directly* on the diseased part, which is assumed to be more sensitive than in health, and consequently will not tolerate as large doses as might be prescribed under other and more indirect modes of treatment. The chief merit of Homeopathy, according to its leading advocates, does not consist in its discovery of the efficacy of small doses, but in the principle that maladies can best be cured by impressing diseased tissue with medicines which operate specifically upon these tissues themselves, rather than on distant parts.

As nearly every household in which Homeopathy is practiced has its "book," and case of medicines, no Homeopathic prescriptions are given in this volume.

HOMERIA.—A fine plant for window culture, belonging to the class known as "Cape Bulbs." It will not grow out of doors in our climate; but our winter suns bring them to perfection at a time when other flowers are rare and when out-door gardening is impossible. The proper soil for the Homeria is equal parts of loam, leaf-mould, and sand. The bulbs should be treated like the Ixia as to potting, watering, and the rest. They flower from April to June, and should then be allowed to rest till October. The principal species are: *homeria lineata*, with long and stiff leaves, marked with white and green lines, small bulbs, flower-stem about one and a half feet long, producing copper-colored flowers; single blooms are transient, but many are produced in succession, and the plants are thus in flower for a long time. It is a showy plant, and blooms about the middle of April. A number of bulbs should be planted in one pot to produce a fine effect; and as the roots grow, the plants should be repotted, for the growth of the roots is so strong as often to break the pot if it is not large enough. Be careful in repotting not to break the ball of earth, and to disturb the roots as little as possible. The *homeria spicata*, is a beautiful plant producing an abundance of red and yellow flowers. *Homeria Collina* has orange and scarlet flowers.

HOMINY.—A preparation of Indian corn, called *large* or *small* hominy according to the grinding. To cook the *large:* Wash, and add twice its depth of cold water; cover and let it cook very slowly for seven or eight hours; as the water boils away, add from the teakettle; when tender, add salt to the taste, and when the water is absorbed, serve. *Small* hominy requires but from one to two hours. To prepare the cold *large* hominy for breakfast: Drop a bit of butter in a small, deep, frying-pan; when hot fill it evenly with hominy, let it heat and brown; serve upside down on a dinner plate. The *small* hominy may be sliced and browned. "*Hulled corn*" is boiled in lye (made by boiling two handfuls of hard wood ashes in two quarts of water for twenty minutes until the hull loosens, washed, and rubbed through several

waters to remove the hull, and the taste of lye; then boiled in clear water until tender.

HONEY.—The natural sugar collected by bees from flowers and the leaves of certain plants. It cannot in any way serve as a substitute for sugar; but may be used with caution in various ways, both as food and as a medicine. Honey varies greatly in color and in taste according to the locality of its production. New honey is a transparent syrup, varying considerably in color from nearly white to a yellowish brown, intensely sweet to the taste, with a sharp acidulous flavor, and an aromatic odor; by keeping the color becomes deepened and the taste acquires more sharpness. After a few weeks, it generally grows thick from the formation of small, crystalline grains, which remain mixed with the fluid parts; the same effect is produced by a cold temperature. The lighter colored honeys are most liable to granulate. Honey is laxative, and when eaten freely as food is liable to produce colic or even diarrhœa. It is generally abundant in the markets in the summer and fall months; it is estimated according to the nature of the flower from which it was taken. The best comes in small boxes (showing one or two sides with glass), the comb well filled with nearly white honey which is supposed to be made principally from the white clover. The buckwheat honey is darker, but very sweet. Large hives of honey are also found, but it is generally inferior to the other kinds. Strained honey is looked upon with suspicion, and is seldom found as pure as the bees made it. When adulterated with sulphate of lime, it may be detected by being insoluble in water. (*See* BEE-KEEPING.)

Clarified Honey.—Honey is clarified by melting the best kind with water over a water-bath, adding the white of egg, and boiling it to throw up the scum; when the scum has been carefully removed, the water must be evaporated, and the honey brought to its former consistence.

Honey Cakes. (*See* CAKE.)

Honey Water.—Take a pint of proof spirits of wine, and three drachms of essence of ambergris; put them into a bottle, shake it daily for a month, and then draw off into small bottles.

HONEY-SUCKLE.—One of the most desirable of the ornamental climbing vines. It grows rapidly in any good garden soil, is very easily raised, has highly ornamental foliage, and bears a profusion of flowers which are generally of the most delicious fragrance. There are numerous varieties of the honey-suckle, of which the most desirable are the *Scarlet* and *Yellow Trumpet*, *Dutch Monthly*, and *Japan Twining*. Of late years some fine varieties have been imported from China, and Japan. Among the Chinese the *Golden-leaved Lonicera* is one of the best; it is a rapid grower, with small wiry stems, the foliage is netted with gold, and the flowers are white and very fragrant. *Lonicera Halliana* is evergreen; perfectly hardy, and flowering monthly in profuse clusters; its flowers pure white turning to yellow. *Lonicera brachypoda*, or Japan Honey-suckle, is a very beautiful vine; its flowers are of delicious fragrance; the leaves are evergreen and very glossy. No hardy vine can excel it.

Tartarian Honey-suckles are large shrubs of much beauty, whether covered with their pink or white flowers, or with scarlet berries. They will grow from cuttings or seeds, are entirely hardy, and require little care.

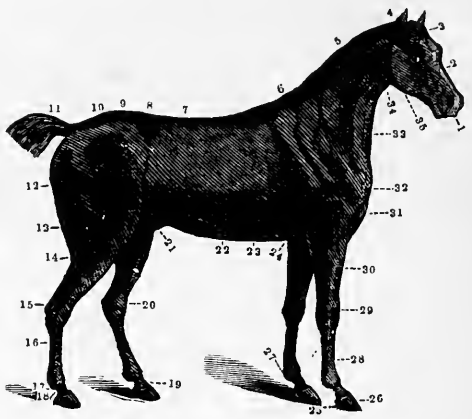
HOOPING-COUGH. (*See* WHOOPING-COUGH).

HOPS.—Hops are the flowers of the hop plant, which is extensively cultivated in many parts of the United States, in England, in Canada, and in Belgium. A particularly rich and loamy clay soil is required for the successful growth of this plant, which also demands liberal supplies of animal manure in a highly concentrated form. The young shoots are good for the table, when cut in the Spring, when not more than five or six inches high; they are eaten as salad, or boiled and served as asparagus, which they resemble. The flowers or hops should be gathered in August; after which, when dried and closely packed in "pockets" or bags, they become a solid mass, of a bright or greenish yellow color, with a fine dust permeating it in which the principal flavoring matter resides. The best hops are of a bright color, between yellow and green; if they are very green they were gathered too young; if very brown, they were allowed to ripen too long on the vines, or they have been over-dried and have lost their peculiar flavor. They should have a powerful aromatic flavor, particularly when rubbed between the fingers; should feel sticky to the hand; and should contain much of the yellow powder above mentioned. Porter brewers prefer hops of a rather brown color; but ale and table-beer brewers use pale hops.

New hops are reckoned as one-fourth or fifth stronger than old ones. When one year old, hops have not lost much of their strength; but after that every successive year takes away from their value, and after three or four years they are comparatively worthless. Hops must be closely packed in stout bags; otherwise they will attract damp and become mouldy and useless.

HORSE.—The only kind of horses which we have reference to in the following remarks are those used for ordinary domestic purposes. The selection of a horse is about as delicate a task as one can undertake, a mistake being very easy to make and very difficult to rectify. The best policy for the purchaser (unless an expert) is to distrust his own judgment entirely and take the advice of some one on whom he can rely and who has a special knowledge of the subject. As this is not always practicable, however, a few rules, such as the best authorities agree upon, may be of service. The first step is to ascertain the age of the horse,

which is best done by examining his teeth. The complete dentition of the horse can be expressed as follows:—Incisors or nippers $\frac{6}{6}$. Canine or tushes $\frac{2}{2}$. Molars or grinders $\frac{12}{12}$. A horse has two sets of incisor teeth, and as the temporary incisor or milk teeth are shed and replaced by permanent teeth at regular intervals, by carefully noticing the size and appearance of the teeth we can generally arrive at the true age of the horse. The temporary grinders so closely resemble the permanent that no notice is taken of them by horsemen. It is important clearly to note the difference between permanent and milk teeth. The latter are much smaller; are what is called constricted, that is, narrower near the gums than on the cutting surface. All teeth have on the upper surface an indentation which is called the "mark." This "mark" is much more evident in the permanent than in the milk teeth. This mark is finally worn out and disappears after the animal is nine years old. At a year old, the colt has cut all his milk teeth; the twelve incisor teeth are all full grown and the marks are clearly seen. These teeth appear through the gums as follows:—The four central ones at ten days; the four middle at about two months; the four corner teeth, as they are called, at about seven months. At two years old the colt's mouth is changed considerably. The teeth are much worn down, presenting a smooth surface, the marks are hardly distinguishable on the central or middle teeth. One of the differences between the permanent and milk teeth can be now seen. The permanent teeth as they are worn grow out again, while milk teeth become smaller. The horse loses his incisors in the same order that he cuts them—the central ones drop out at two years and six months and are replaced by the permanent. At three years old the central permanent incisors are full grown, the "marks" or black spots on the top, are on them, and have disappeared from the "middle" teeth. These drop out at three years and a half, and at four years old the horse's mouth presents the following appearance:—The central and middle permanent incisors are in their place, while the marks are obliterated from the corner milk teeth. The tushes or canine teeth are now just showing through the gums. These teeth are not found in the mare. At four years and six months the corner incisors drop out; at five years old all the teeth are present, and from that date no further shedding is seen. The marks on the central incisors disappear at six years old. At seven years old the middle lose theirs, and a small protuberance is seen on the outer edge of the corner teeth. These lose their marks at eight years old, and from that date no great reliance can be put in ascertaining the exact age. The gums fall away from the teeth, their upper surfaces are worn smooth, black streaks appear running up and down, covering the front of the teeth at about twelve or thirteen. Now it should be remembered that a horse is considered to be at his prime at five years old. Hence, dishonest dealers resort to various expedients to cause horses, either older or younger, to show an apparently five year old mouth.



Points of Horse.

1. Muzzle.—2. Face.—3. Forehead.—4. Poll.—5. Crest.—6. Withers.—7. Back.—8. Loins.—9. Hip.—10. Croup.—11. Dock.—12. Quarter.—13. Thigh, or Gaskin.—14. Ham-string.—15. Point of the Hock.—16. Cannon.—17. Fetlock.—18. Pasterns.—19. Coronet.—20. Ham, or Hock.—21 Sheath.—22. Flank.—23. Girth.—24. Elbow.—25 Heel.—26. Hoof.—27. Fetlock.—28. Cannon.—29. Knee.—30. Arm.—31. Breast or Bosom.—32. Point of the Shoulder.—33. Windpipe.—34. Gullet.—35 Jowl.

"**Points.**"—We shall not attempt here to go fully into all the points for which the various breeds of horses are noted, but only to state those which should be found in any horse required to do good service. See that the nostrils are large, round, well formed; that there may be no impediment to the breath. Let the eye be full, showing little or no white. Do not let the throat be too narrow. See that the head hangs well out from the chest and there will be less chance of the animal roaring. The shoulder is a part of great consequence. If speed is required, a sloping shoulder is essential, but an upright shoulder is better in a draft horse, as it gives the animal more power and more readily adjusts itself to the collar. Let the fore-arm be long, the knee flat and large. Consider it as a safe rule that all bones above the knee are better long, those below short; hence, short cannon and pasterns are desirable. Look out for splints; (which see below). Let the walls of the hoof be well shapen, not scaly but firm and smooth; look out for corns on the sole; let the frog be large. In farm horses large flat feet are looked for. In higher bred animals the feet should be small, the toes if anything pointing a little in. Let the chest, unless speed is desired, be wide and full, the ribs well sprung—the deep chest of the race horse being unsuited to the continued strain required for farm work. See that the abdomen is not too prominent, but well rounded, tapering off towards the thigh joint, firm under pressure. The back should be well shaped, not camel-backed, as it interferes with the action of the animal, nor too high at the withers. Let the loins be well rounded to give speed, not too much "hog-backed," as it hurts the gait.

Now examine the hind quarters. Look out for spavin. See "Diseases" below, for symptoms of Spavin. The hocks, fetlocks, and quarters, should be on a straight line. As in the front legs, all the bones about the hock should be as long as possible, those below the hock as short.

When a horse is to be purchased, examine the eyes at the stable-door, before he is brought out; the light coming upon them in that situation will enable you to discover any defect that may exist. Both eyes must be in an equal degree of light; and if they are not alike, one must be diseased. Weeping, cloudy, dull-looking eyes, are unsound; and if the eye be at all diseased, do not purchase.

Now take him out of his stall and run him down slowly on a rough or stony descent, at the end of a halter, his head unsupported, and no whip near him. If he go boldly, with his knees bent, and his foot flat and firm to the ground, without dropping his head, his soundness before may be calculated upon; and if, on running him up hill, he go with his hocks regularly together, and not dragging the toe, nor dropping from the hip, he is free from lameness. *Pottering* on the toe, and *feeling*, denotes that he is not sound. The horse should be shown quietly, because, when he is agitated, a slight lameness may be overlooked; and always *see him ridden*, for many horses are pleasant to ride that are unpleasant to look at when ridden. When brought out, let the horse be placed with his fore-legs up hill: then, if his joints be at all bent over, or his legs shaken, you will best discover it.

Never agree to take a horse before you have tried him, and had him examined by a veterinary surgeon.

FOOD AND MANAGEMENT.

Food.—When the horse is engaged in work, grain of some kind ought always to accompany the hay. While he is working moderately four quarts of oats is an average "feed." Under hard work he may go up to six, or in exceptional cases, even eight, at his third meal, or possibly his second. Half the quantity of old corn is considered equivalent. After a heavy feed a horse should not be worked hard under an hour, or under half an hour after a light one.

Never feed a horse after hard work until he is cooled off. He may be permitted, however, to have a small forkful of hay upon going into the stable. Oats are the best grain, barley next. Wheat and Indian corn are less suitable; the former being too concentrated, and the latter too heating. Grain is always fed more advantageously when ground or crushed, and wet some time previous to eating. Corn-meal put upon cut hay, wet and well mixed, is good steady feed for slow working horses, if not fed in too large quantities. Four quarts a day may be fed unmixed with other grain; but if the horse be hard worked and needs more, mix the meal with oats, wheat, bran, or linseed-oil meal; or, use corn and oats ground together. When confined to dry food, roots or apples given once a day are excellent, being both wholesome and very nutritious. Carrots are the best of the roots, as, besides giving muscle and working power, they improve the wind and prevent all tendency to "heaves." They have even been found effectual in removing an obstinate cough. Potatoes, parsnips, beets, and turnips, in the order named, are next to be preferred. The potatoes are improved by cooking. Mixtures of food are best, as of cut hay, meal, and roots. Old horses, or such as are worked hard, will thrive much better if their food be given in the form easiest of digestion, as cut and steamed. Much vital power is exhausted in digesting dry, raw food.

Do not feed one kind of food too much. Mix a little bran with oats. Bran cannot be swallowed until thoroughly moistened, and this requires considerable mastication, in which the oats become well ground and mixed with saliva. If these latter are crushed, a great saving will be effected, as horses are apt to bolt their food without sufficient mastication, and much nourishment passes out in the fœces.

Horses should be fed regularly and at stated times. If their food is given at the proper time, and they are allowed to finish it at once without expecting more, they will lie down quietly and digest it. This will be much more refreshing to them than to stand at the rack or trough, nibbling continually at hay or oats. What remains when a horse is done feeding should be at once withdrawn.

Water should be given three times in summer, and in winter twice a day. Soft or running water is much the best. While working they may have it as often as they desire; but they should neither be fed nor watered when heated; nor driven immediately afterwards. At the trough, on the road, &c., give but a few swallows.

Salt.—A piece of rock-salt should always be within a horse's reach.

Regulating Bowels.—An old custom, and one not to be followed, is giving a ball to a horse in the spring of the year. Never give balls, nor strong medicines of any sort, unless absolutely required. A bran mash with a few handfuls of flax-seed mixed in with it, is often far better than expensive and dangerous doses. It is an excellent plan to give every Saturday night, six or eight quarts of bran, mixed up with hot water, with a tablespoonful of salt and a pinch of sulphur added.

The Hoof.—A sponge moistened with water and Castile soap, may, with advantage, be used to clean out the hoof itself, taking care not to moisten the coronet. Another very common practice, in many parts of the country is to fill the hoof of the horses every night with cow-dung, or with Indian corn meal. Now, what is desired by stuffing horses hoofs is to keep

them soft, to prevent the horn becoming dry, and to promote its healthy growth. The danger of too often stuffing the hoofs is, that the horn becoming too soft from too much moisture is apt to decompose rapidly and a bad case of Thrush to result. The very best stuffing in the world is a mixture of cow-dung and stiff clay—equal parts of each. Apply only to the fore feet not oftener than three times a week, and only then when the horse is kept in the stable.

Grooming.—Thorough grooming is not less essential to the health of a horse than proper food. Especial care should be taken of the legs and fetlocks that no dirt remain to cause that distressing disease *grease or scratches*, which comes from filthy fetlocks and standing in dirty stables. When a horse comes in from work on muddy roads with dirty legs, the dirt should be dried and then brushed off, then rubbed with straw; then, if very dirty, washed clean with lukewarm water and *rubbed dry* with a piece of sacking. If not thoroughly dried they had better not have been washed. If the mud has been splashed thickly on the horse's belly and sides, these should be cleaned in the same way. If sweaty or warm from work the horse should be blanketed, if he is to stand a minute in the winter air. If put at once into the stable, he should be stripped and rubbed vigorously with straw for five minutes or more and then blanketed; the blanket must be removed in an hour, and the horse given water and feed if it is the proper time. It will not hurt him to eat hay when hot, unless he is thoroughly exhausted, in which case all food should be withheld for a while. A horse should never stand in a draught of cold air, if he cannot turn and put his back to it. He should never be turned into a yard to "cool off" even in summer; neither should he be turned out to pasture until quite cool.

Exercise.—When a horse is not worked, he should be exercised morning and evening—a brisk trot of three miles is not too much.

A horse should be always driven gently when he is first taken out.

DISEASES AND ACCIDENTS.

Nearly all the diseases of horses can be traced to improper food, air, or treatment. Some few are obscure in their origin and many are set down as contagious, when the disease springs from the same cause attacking all the animals at once. We emphatically caution against use of medicine by the inexperienced, except where the case is unmistakable or experience is not to be had.

Bots see *Worms*.

Blind Staggers, see *Staggers*.

Broken Knees see *Knees*.

Canker, see *Thrush*.

Catarrh, see *Colds*.

Chapped Heels, see *Scratches*.

Colds in themselves are very simple things, though often the symptoms of graver disorders. Horses badly blanketed in spring and fall are very liable. The treatment is simple—give a warm bran mash with half an ounce of nitre twice a day, and keep the animal better housed. Remember that success in treating colds depends upon keeping the temperature of the animal equal, day and night. Give no corn, and plenty of water. When colds increase in intensity, and we get the running of matter from the nose, we give the name *Catarrh* to the disease. Now it is as well to state, that in all disorders of the air passages, the animal should never be bled or receive medicine in the shape of balls. Catarrh is often a fatal disease from mismanagement. Treat very simply with mashes and nitre; rely on fresh air; should the glands of the neck be much enlarged, apply a stimulating liniment as gin, vinegar, and water. In troublesome cases mix two drachms of camphor, the same amount of belladonna, with molasses, and put it on the back of the horse's tongue—a little sulphur burnt in the manger does good. Horses are liable to other diseases of the air passages, as pleurisy, pneumonia, (or lung fever), bronchitis etc., but the sketch of the treatment we have given for catarrh covers all we can really do—these cases must be left to nature, assisted by plenty of fresh air, warm clothing, and careful nursing. Do not give drugs at all, nor bleed, nor blister. If the animal is very restive give ten drops of aconite as a sedative. If the animal is left unmolested, these troublesome diseases easily run their course and disappear—none of them are contagious at all.

Colic is the irritation of the coat of the small intestines, caused always by an active irritant interfering with proper functions of the stomach and bowels. Symptoms are strong contraction of the intestines—the animal throws itself down, jerking its legs, trying to ease the pain—is then better for a little—another spasm comes on, all symptoms repeated. In flatulent colic, when the intestines are inflated with wind, the symptoms are similar. Purge well—give clysters of warm soap suds—where much pain is evident, an ounce and a half of opium. For the "Flatulent" give three drachms of carbonate of ammonia in a quart of cold water, and opium as above. Keep the animal well tied up and in a narrow stall.

Corns should be cut out and the shoes changed. They arise from improper shoeing.

Diarrhœa is due to a derangement of the intestines from the presence of an irritant causing an increased secretion—may arise from sudden chills acting on the blood—wet grasses—bad food—is often the symptom of other diseases. The best treatment is, when produced by an irritant, to remove it by giving purgative No. 2, under REMEDIES below, or three or four ounces of castor oil. Nurse well and give warm bran mashes. When due to sudden chills, give half an ounce of opium—injections of warm water and salts. When the evacuations are very offensive, give carbolic acid, one to 25 of water. A good astringent for diarrhœa—not to be given too soon—is

powdered opium, 1 drachm; tincture of catechu, ½ ounce; chalk mixture, 1 pint; give as a drench.

Dysentery is the inflammation and ulceration of the large intestine—generally follows bad cases of diarrhœa. Treat with oils, in two ounce doses. In bad cases, when straining is evident, give a quart of rice milk, with one or two ounces of laudanum. Rely on careful nursing and carbolic acid, as in diarrhœa, to check decomposition. Ipecacuanha in two-drachm doses is good.

Founder, or Fever in the Feet, perhaps the most frequent cause of lameness, results from over driving on hard roads, stones, pricks, or to bad shoeing. Also may arise from causes other than local—may be a symptom of a feverish condition of the system. The symptoms are great heat and tenderness of the feet, especially about the coronet, throbbing of the arteries, great lameness. The best treatment is systemic. Remove the shoes and give a mild laxative (No. 2, under REMEDIES below), to be followed by febrifuges, such as nitre, half an ounce; opium, one ounce; or ten drops of aconite, camphor, two or three drachms. Bleeding from the foot should be resorted to only in extreme cases.

Glanders, a fatal disease, arises from dirty stables—a specific poison, causing the formation of ulcers in the nose, with a great discharge—generally from the left nostril—and a lump firmly attached to the lower jaw—these symptoms appearing, immediately slaughter the animal—there is no cure, and the disease is very contagious, endangering even man.

Grease. (*See* SCRATCHES.)

Inflammation of Kidneys (Nephritis), a common disorder, resulting from bad food, colds, over-exertion, etc. The urine is very scanty and dark-colored. Do not give aloes, as it acts on the kidneys; but treat with oil and opium and calomel, as in liver disorders. Hand-rub the animal well over to promote circulation. Put a mustard poultice on the loins, keep warm, and feed with mashes.

Lice.—Rub white precipitate well into the hair, being careful not to sweat the animal—or a weak solution of carbolic acid and water.

Liver Diseases—shown by clayey and offensive evacuations—are often difficult to detect. The animal appears heavy, sleepy, feverish, poor appetite, tenderness on the off side. The treatment for diseases of the liver is: Give one drachm of calomel, one drachm of opium, and linseed meal to form a ball, every night—with a pint of oil in the morning.

Broken Knees.—Broken knees if neglected often result in permanent lameness. Cleanse thoroughly with warm water, put on a bran poultice, warmed, for twenty-four hours till the inflammation is somewhat lessened; then having removed the poultice, bandage tight with water, with a few drops of carbolic acid in it. Should the place become too dry, grease a very little. Unless the case is very bad, walk the animal a little twice a day.

Lameness.—Any irregularity in the movement of the horse is always sufficient to condemn the animal as unsound. (*See* FOUNDER, KNEES, QUITTOR, RINGBONE, SAND-CRACK, SCRATCHES, SHOULDER-SLIP, SPAVIN, SPLINTS, SPRAINS.)

Lung Fever. (*See* COLDS.)

Pleurisy. (*See* COLDS.)

Pneumonia. (*See* COLDS.)

Side Bones. (*See* RING BONES.)

Quittor, a very offensive disease of the interior of the hoof, results from careless treatment of the thrush. Inject zinc or acetate of lead, or any strong caustic. This is a very dangerous disorder. Use the following wash; but if possible consult a veterinary surgeon:

Corrosive sublimate—half an ounce.
Hydrochloric acid—ten drops.
Methylated spirit—four ounces.

Ring Bones and Side Bones are bony growths on the long or short pastern, generally noticed by the horse going lame only when first taken out of the stable. Light cases will yield to blistering, but more severe cases require firing. (*See* REMEDIES below.)

Sand Crack is a separation (generally mechanical), of the horny fibres of the foot. Drive a fine nail through the crust of the hoof, allowing it to project on either side, and bind up with wire. Allow perfect rest.

"**Scratches**" or "Chapped Heels" generally arise from allowing the feet to remain wet over night. The skin over the heel cracks and causes great pain. The best cure is prevention. Do not wash horses legs; or if you do, wipe them dry. If noticed early, apply glycerine with a soft brush twice a day. Worse cases should be first treated with mild astringents. Scratches, if neglected, are apt to turn into that troublesome disorder termed by horsemen "grease." A filthy discharge sets in from the heel. If this is neglected, a red fungoid growth sets in, emitting an unmistakable odor. Grease must be treated as scratches, viz.: With glycerine and a weak solution of chloride of zinc; 30 grains to a pint of water, painted on. When the fungoid growths appear they must be cut off and carbolic acid applied. Build up the system and keep your stables in better order.

Shoulder Slip is the strain of the muscles of the shoulder—commonest in young draught horses—from sudden jerks at the plough. The animal very lame, will drag his foot round, throwing out the toe with much effort. Give a month's rest. Rub the shoulder with stimulating liniment, and give a mild laxative.

Spavin is a bony growth on the inner surface of the hock joint, giving a stiff motion of the hind leg, and making the animal tread on its toe in trotting. Fire and blister early. (*See* REMEDIES below.) If neglected, a spavin, though not materially injuring the animal's usefulness, will destroy his gait.

Splints.—Long growths on the small cannon bones. Often they do not interfere with the movement of the animal and had better be disregarded. Veterinarians differ as to the cause

of these growths, but they probably arise from some injury to the covering of the bones themselves. They are often very persistent, and yield only to the hot iron. Blister No. 1, given below, is sometimes useful.

Sprain of the Back Tendon, just above the hoof, is a common form of lameness, attended with much heat and swelling. Cut the hair as closely as possible, then should there be any danger of a blister touching the hoof, anoint the hoof with lard. Then rub in blister No. 2, given below, with the hand thoroughly, leaving plenty on the surface. Tie the animal's head well up, or better still, put on a cradle. Do not bed with straw, as it will cause useless irritation to the animal, but put down sawdust, as the pain is apt to cause the animal to stamp his feet. After a week rub a little neatsfoot oil over the place with a feather, to soften it.

The animal refuses to walk, trembles, and is apt soon to fall.

Staggers.—Stomach Staggers are caused by over distention of the stomach with food, and must be distinguished from *Simple* Staggers which arise from pressure of blood on the brain, caused by too tight a check rein or throat lash. May take three forms:—I. *Sleepy* Staggers: Give purgative No. 1 below.—II. *Delirious* or *Blind* Staggers: Bleed till the animal drops; then give a mild purgative. III. *Paralytic* Staggers is rarer, blister well (with blister No. 2, below) along the spine, and then purge.

Thrush and Canker are the ulceration of the frog and the sole. They are often found separately. They arise from too much moisture affecting the horn, which decomposes with a very offensive odor. Remove the cause—generally improper stuffing—treat with a solution of five grains of zinc chloride to an ounce of water, and stuff the feet at night with tow moistened with a weak solution of carbolic acid, a tablespoonful to a quart of water.

Worms. I.—Bots are the larvæ of a species of gadfly, which find their way into the stomach of the horse while turned out to grass. They are from half an inch to three-quarters in length, of a dark red color, somewhat pointed at either end. They attach themselves to the wall of the stomach, and when the time comes will all pass away in the fæces. It has been positively ascertained that they do no harm whatever to the horse, nor is there any remedy known to veterinarians which will remove them without injury to the animal.

Worms. II.—Thread Worm. A much smaller species of worm is found in the rectum. This pest, though not interfering with the condition of the animal as much as the former, causes much more uneasiness. The animal becomes very restive, stamping his hind legs, often throwing his heels above his head from the severe itching caused by the thread worm depositing its eggs, which it invariably does, on the delicate skin, immediately outside the rectum. If the anus of a horse afflicted with thread worms, be kept *constantly* well greased, these eggs will drop off when laid, and the supply of young worms thus being cut off, the disorder will cease. But it is most important to keep grease always applied to the anus, as otherwise the worms, which hatch out in a few hours, will find their way back into the rectum. In addition to this, a strong injection, made from boiling tobacco in water, alternated with linseed oil will prove efficacious in allaying the irritation.

Worms. III.—White Worms are found in the small intestines. They are of a pale pink color, about six inches in length, shaped not unlike the earth worm. Symptoms, a hidebound, stiff coat, large appetite and poor condition. Considerable mucus is voided, and generally dries round the anus. Several worms pass with the fæces. Give a drachm of tartar emetic in a bran mash every night for a week and then administer a good purgative ball, to be followed by a pint of linseed oil. After which give a drachm of sulphate of iron mixed with the oats once a day for three days. Ordinary vermifuges as sold by veterinarians contain calomel and other preparations of mercury, and are apt seriously to injure the horse.

GENERAL REMEDIES.

We repeat the caution that the inexperienced should never give strong medicines, or weak ones, except in the most obvious cases.

Aconite.—Ordinary dose 5 to 15 drops in a quart of water.

Ball.—A simple condition ball, or gentle tonic, powdered caraway seeds, 6 drachms; ginger, 2 drachms; with 20 drops of oil of cloves—with meal.

Bleeding.—In the roof of the mouth in the second wrinkle behind the front tooth; or, if much blood is to be drawn, in the third wrinkle. In bleeding elsewhere professional advice is necessary.

Blister. **No. 1.**—A strong sweating blister for splints, spavins, ring bones, etc.

Biniodide of Mercury, 1 drachm; Lard, 1 ounce.
After applying, wash with arnica water for several days.

No. 2.—Powdered cantharides, 1 part; Lard, 6 parts.

Calomel, ordinary dose, 1 drachm.

Carbolic acid, ordinary dose, 1 teaspoonful in ¼ pint water.

Castor oil, ordinary dose, 3 ounces to a pint.

Chalk mixture.—Take of prepared chalk 1 troy ounce; glycerine, 1 fluid ounce; gum arabic, fine powder, 240 grains; cinnamon water, water, each 8 fluid ounces. Rub them together till they are thoroughly mixed. Dose, 1 pint.

Drench.—A good cooling drench when horses are in too good condition, is:

Nitre	1 ounce
Sweet spirits of nitre	2 ounces
Tincture of digitalis	2 drachms
Whey	1 pint.

Firing.—The application of a hot iron to promote the absorption of a morbid growth. No one should use it before actually witnessing the operation.

Laudanum, ordinary dose, 1 to 3 grains. Large doses of laudanum or opium should not be repeated more than once in four hours without experienced advice.

Nitre, ordinary dose, ½ oz.

Opium, " " ½ oz. to 1½ oz.

Purgatives.—**No. 1 Mild.** Barbadoes aloes, eight drachms; nux vomica, one drachm; carbonate of soda, one drachm; and ginger, 3 drachms; make it into a ball with honey or soap.

No. 2 Strong. Barbadoes aloes, three drachms; powdered rhubarb, two drachms; ginger, one drachm; and caraway oil, 15 drops; made into a ball.

To give liquid medicine.—Use a clean horn with one end open. To do this properly one person should raise the horse's head as high as possible, and another seize the tongue with his left hand, and draw it as far as he can out of the right side of the mouth; then insert the small end of the horn to the roots of the tongue, pour in the medicine slowly, releasing the tongue at intervals, to let him swallow. Some horses will swallow a large quantity at once; others seem unable to manage more than a tablespoonful at a time.

HORSE RADISH.—This plant grows wild in wet ground, but the kinds used as a condiment are cultivated in gardens. Plant same as common radish in a damp shady spot. The tops when young are sometimes used as greens, but generally only the large white sorts are used. These are ground, or cut into very small pieces, and used as a sauce for roast beef and other meats. When finely ground the flavor is agreeable and very pungent, but this is soon lost on exposure to the air, and hence it should never be prepared until just before using. Horse radish is always in season, but it may be preserved by keeping moist and cold through burying in wet sand. (*See* SAUCES.)

HOSIERY.—All hosiery is to be judged by the fineness of the thread and the closeness of the texture, which, in the case of stockings especially, may be partly appreciated by weighing, as it were, the articles in the hand. In ribbed hosiery, a deception is sometimes practised against which it is necessary to guard. The spaces between the ribs, which ought to be formed by an inversion of the stitch, contain no stitch at all, but an open range of threads, pervious to the weather and utterly destitute of durability. As the ribs of hosiery exposed for sale are necessarily almost in contact, the fault cannot be detected without introducing the hand and opening the tissue, when it will instantly be apparent—exactly resembling the flaw caused by a dropped stitch in a stocking in wear. In cheap cotton stockings the feet are often cut out and sewed together; but the seams invariably hurt the foot. Concerning the different materials of which hosiery is composed, the same principles apply as are laid down in the article on CLOTHING.

HOT-BED.—A hot-bed which will serve for either flower or garden seeds may be made as follows:—Make a frame, say, six feet long, five feet wide, and two feet high at the back, and fifteen inches at the front; the sides must slope from the back to the front. Let these be cleated so as to prevent warping, and fasten them together at the corners with hasps. The whole structure, inside and out, including the sash-bars, should have two good coats of coarse paint, which will be most serviceable in protecting it from the weather. Make or purchase two sashes, each three feet by five, with the panes of glass lapping like shingles, instead of being fastened with putty to cross-bars. Then dig a pit of the same size as the frame, and thirty inches deep; set the frame over it and fill the pit with fresh horse-dung which has not lain long, nor been sodden by water; beat it well down with the fork, but do not tread it down. Put in the sashes and let it stand three or four days; after which, put light and very rich soil into the frame six or eight inches deep. Cover this again with the sashes and let it stand two or three days, until the heat begins to subside, when it will be ready for use. Stir the surface of soil and sow the seeds in shallow drills. In a hot-bed designed exclusively for flowers, the soil may be composed of alternate layers of manure and tan-bark, or decayed chips or leaves, with the latter on top. Put no soil over this at all, but plant the seeds in pots in mellow earth, and sink the pots to the rim in the tan. The bottom heat will soon start the seeds into growth.

The care of the hot-bed involves constant watchfulness. The frames must be kept covered with the glass sashes whenever it is cold enough to chill the plants; at all other times, fresh air, which is indispensable to their health, must be freely but very cautiously admitted. When the sun is quite warm, raise the sashes enough to admit air, and cover them with matting or blankets, else the sun may kill the tender young plants. If there be too much bottom heat in the bed, so as to scorch or wither the plants, lift the sashes, water freely, shade by day, and make deep holes in the beds with stakes for the easier escape of the heat, filling them up again when the heat is reduced. Water the bed at evening with water which has stood in the warm sun all day, or, if it be freshly drawn, or the weather cold, add a little warm water. On very cold nights, cover the sashes and frames with straw mats. After the Spring's work is done, take up the frames and store them away in a dry place for another season.

HOUR-GLASS.—One which will serve all practical purposes may be made thus: Fit a cork into the necks of two oil flasks, and make a hole through it with a round file. In the middle of this hole fasten a bead, or piece of tobacco pipe a quarter of an inch long. Dry some sand over the fire, and sift it finely; fill one of the flasks with it, fit in the cork, and invert it over a pan; let it run for an hour; collect the sand that has passed, and pour the rest away; return the sand to the flask, and fit in the other. Place the whole in a wooden frame. *Egg-glasses*, to run three minutes, may be made with small phials. The flasks should be cleaned and dried, and the cork sealed in.

HOT-WATER BAG.—A very great convenience in the sick room. A rubber bag, with a funnel closing by a metal screw. While more yielding than the bottles or soap-stones, ordinarily used to apply heat to the body, it retains heat as long and can be applied anywhere. Rubber and drug stores usually have them.

HOUSE—§ 1. The planning of a dwelling is not apt to be accomplished in a way that will give satisfaction without much previous deliberation. The particulars of style and arrangement are so numerous that much may be gained by considering a statement of the most important of them. This may do something toward preventing, when the thing is done, a frequent recurrence, in regard to some later suggestion, of "If I had only thought of that." Of course where a somewhat elaborate house is in contemplation, special books will be consulted and interviews held with a skilled architect; we hope, however, that, even in such cases, the following article will not prove valueless as an introduction to the subject, and that regarding the

average run of comfortable homes, it may enable the reader to clearly and fully decide what he wants, so as to start the builder readily and intelligently.

§2. At the outset, it is best to arrange to spend no more than three quarters of what you can spare for the purpose, as during the progress of the work, new features enough to use up the remainder will be sure to suggest themselves.

SITUATION AND SURROUNDINGS.

§3. In cities the ground should be high, if it can be had; but if it be too high, the water may not rise to the upper stories. Nearness to old water courses is to be carefully avoided, as they, when covered over or choked up, are sources of bad odors and disease. One of the finest houses on Fifth Avenue is reported to be almost untenable on this account.

§4. In the country many things go to the making of a thoroughly suitable site, but THE FIRST CONSIDERATION SHOULD BE FOR THE DRAINAGE, and for this reason both the soil and the subsoil should be carefully examined. If the subsoil be hard and impervious to water, no matter how gravelly and porous the soil itself may be, the situation will be damp, malarious and unhealthy. This is not of so much consequence in the very few cities where a thorough system of drainage has been established; but in the country, or in towns where each house is supposed to provide for its own drainage, a soil that holds water and that is not dry for at least ten feet below the foundations of the house or that has not sufficient slope to allow the rain-fall to run off rapidly, is utterly unfit for the site of a dwelling-house. Next in importance is a supply of water for domestic use. In the country, especially, this is a vital consideration; and it is better to incur the expense of bringing water from a distance either by gravitation or forcing power, such as the hydraulic ram, *or a pipe from a distant spring*, than to sacrifice health to the economical convenience of a well at the back-door, unless precautions are taken to prevent ingress of surface water and drainage. Health and convenience depend so much on the water being *abundant* that especial care should be bestowed on this point. Any system of house drainage largely depends for its effectiveness, on the supply of water and without efficient drainage the best situated of houses will become unhealthy. A quickly running stream, so long as it is not subject to extensive floods, is an advantage, and may be the means of carrying off the unhealthy accumulations of a country residence; but dammed up waters of all kinds, unless there is a good stream through them, and especially stagnant ponds, however ornamental, should be carefully avoided near a house. If there is enough water to maintain a minimum depth of six feet over at least two acres, it will not stagnate. Flooded meadows also are by no means desirable, and especially such as remain wet for a long time after being submerged. No spot is so well suited for a house as a slight rise or knoll, which looks down on all the surrounding land; and from which the surface waters run off easily and quickly.

§5. **Exposure** has much influence on general comfort. In this particular, two things are to be considered, the prevailing objectionable wind, and the sun. In cities, other things even, streets running North and South are to be preferred, as then all the rooms have the sun during either morning or afternoon; but generally on the North Atlantic coast, the windows of houses so situated do not get the sea-breezes of summer, and in New York they do get the cold North-westers of winter. Where the street runs East and West, the North side should be chosen when the front rooms are to be occupied most constantly, and the South side when the back rooms are preferred or when it is desired to have sunny back yards. The morning sitting-rooms and especially THE NURSERY SHOULD FACE THE MORNING SUN.

§6. In this climate, the particular wind which most of us wish to avoid is that from the East or North, sometimes the one and sometimes the other being the worse according to surroundings. There should face the objectionable quarter, one of the sides in which there need be but few openings. THE KITCHEN AND LARDERS HAD BEST FACE THE COLD WIND, as the kitchen is always heated and it is best to keep the larders as cool as possible. As the house should have plenty of sun, especially in the morning, a northern exposure for the rooms most used is not desirable. At the same time it is thought by some that a south-western aspect should be avoided, because with that exposure the sun is very powerful. This depends, of course, upon what rooms are to be most used and at what seasons. Most of the average American's waking hours at home are spent in his dining-room, and this should be the favored room if his wife cares to make the best of home for him. A summer-house on the coast should, of course, have its openings well exposed to the sea-breeze. The south side of a gentle eminence, with the house fronting to the south-east, is generally the best situation, in most places where this book is apt to be read.

§7. **Trees.**—There is, perhaps, nothing which conduces more to the comfort of a house than the shade and protection of trees; and yet very often the first thing done after the site of a house is selected is to cut down all the trees for convenience in building. It is considered so easy to plant out young trees; but it takes a long time for trees to grow, and it is quite worth while to go a little out of the way to find a spot where there are oaks, maples, etc., for shade, and cedars and other evergreens for protection against the blasts of winter. If they cannot be found already growing, they should be planted at once. At the same time it is not desirable to have trees very near the house itself. If too tall or too close together, they obstruct the light, prevent

the free circulation of air, and render the ground damp; moreover, the decaying of the leaves in autumn, and the imperfect vegetation under the branches, sometimes give rise to unwholesome exhalations.

INTERIOR ARRANGEMENT.

§ 8. Most of what we have to say will refer to the lower floor, because as most of the working hours are spent on that floor, THE ARRANGEMENT OF THE OTHER FLOORS SHOULD BE SUBORDINATED TO MAKING THE LOWER FLOOR AS CONVENIENT AS POSSIBLE, and when it is determined upon, the other floors will necessarily adapt themselves to it. Do not adopt any feature solely because you have admired it in another person's establishment. It may be very consistent with his needs and very inconsistent with yours. A person's house should be as much a growth from his individuality as a snail's shell, and people are not as nearly alike as snails. Ask yourself what rooms and features in rooms you and your family use most, and arrange with reference to that.

§9. To begin at the beginning; here are two ways of treating a house containing but a single room.

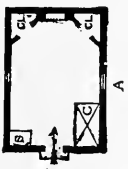


Fig. 1.

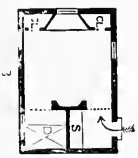


Fig. 2.

In Fig. 1, "the door opens immediately opposite the fire-place; a cold draught is likely, therefore, to be constantly traversing the whole length of the floor, and as the chimney is placed in the outer wall, a great deal of heat will be lost. Moreover, the bed C and the sink S, are entirely exposed to view, and thus privacy and cleanliness are scarcely possible. Now a man may, with comfort and decency, make his kitchen his living room but he will find it disagreeable if he has in addition to use it as a bedroom and a sink room."

§ 10. Now consider Figure 2. Here the door and chimney are so placed as to occasion the minimum of draught, and the chimney being placed in the body of the house, as much heat as possible is saved. A few feet of board partition at the back of the chimney makes a recess for the bed and also an entrance lobby with room for the sink, both of which may be curtained off as shown by the dotted lines. The two closets are placed at the other end of the room, so that a window seat, which may also serve as a locker for coal or anything else, may be placed between them. This plan would probably cost $10 more than the other, the interest on which would be about one-third of a cent a day, paid for the difference in comfort and decency. This illustrates the difference between an ill-considered—or rather a not-considered—and a well-considered way of doing the simplest thing, and it illustrates the fundamental principles of domestic architecture.

§11. Of course a house is primarily to be slept in; but as this can be done in any room, the first distinct necessity is a place to cook in, and the second step is to separate the place where are performed the ungraceful operations incident to care of food and the person—the sink room. Next naturally comes a separate place to sleep, next a "living-room," a place to *live* as human beings, distinct from the operations we perform in common with the beasts. To this room will naturally be transferred the dining table as man tries to elevate the taking of food from a purely animal process into a social and intellectual enjoyment, and the higher man rises, the more he tries to elevate this function. We now get to something like this—a plan for a pioneer's log-house of one story.

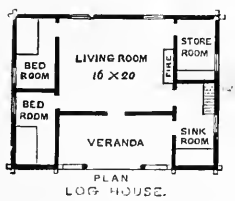
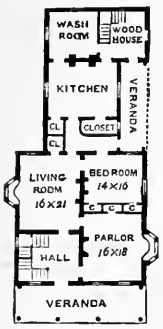


Fig. 3.

Fig. 4. Pioneer's log-house. (Perspective for Fig. 3.)

In this plan, there is a choice between having a draft across the foot of the bed in the farther bed-room, or breaking up the symmetry of the living-room by moving the door of that bed-room further forward.

§ 12. If the person building in the country is able to spread himself into all sorts of conveniences for stowing fuel and food, and for preparing the latter and taking care of his clothes and person, he is apt, for his principal floor, to come to something like this.



PRINCIPAL FLOOR PLAN.
Fig. 5.

On a hill-side in the country or in a densely packed city, the back part of this plan will go into his basement, his bed-rooms will all be up stairs, and his principal floor is apt to be something like Fig. 7.

It is always cheaper to use only the foundation and roof necessary for one-half or one-third of the floor-room, by building his house in two or three stories.

Fig. 6. (Perspective for Fig. 5.)

§ 13. Before going further let us emphasize the fact that THE WIDTH OF A ROOM FROM WASHBOARD TO WASHBOARD SHOULD ALWAYS BE THE WIDTH OF A DEFINITE NUMBER OF BREADTHS OF CARPET. (*See* CARPET.) This saves waste in cutting. If a number of rooms are of exactly the same size, the carpet, as it wears, can be moved from the more important room to the less important.

§ 14. The principal floor plans Figs. 5 and 7 have a grave but frequent fault, in not leaving two rooms, at least, connecting by a very wide door. But with this exception, the latter is *the* plan, of all yet discovered, which suits everybody from poor to rich, and from city to country. The small farmer perhaps builds a one-story wooden house 18 x 25, does without any basement, uses the front room in Fig. 7 for kitchen and living room, the large back-room for a bed-room, and stows away a child or two or a lot of miscellaneous traps in the small back room. The man on Fifth Avenue builds 25 x 65, and has a basement arranged just like the first floor, only with a number of closets between the large rooms, one of which has a sink. The

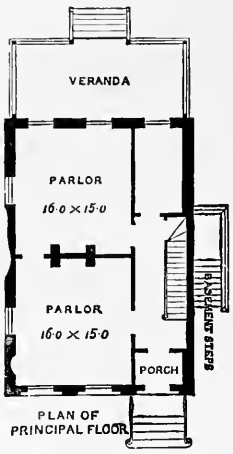
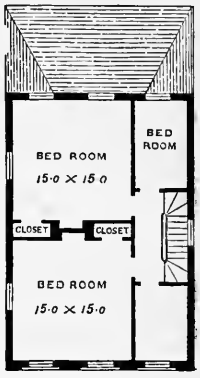


Fig. 7.



PLAN OF CHAMBERS.
Fig. 8.

front basement room he uses for a billiard room, the large back one for a kitchen, and the small back one is fitted with stationary tubs for a laundry.

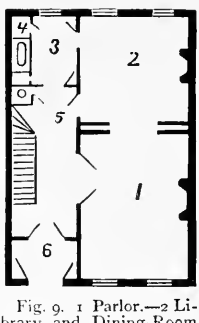


Fig. 9. 1 Parlor.—2 Library and Dining-Room combined.—3 Pantry.—4 Dumb-waiter.—5 Hall.—6 Vestibule.—o Water-Closet and Lavatory.

The principal floor he modifies like Fig 9. by putting sliding doors between the large rooms, in place of the chimneys, and puts a chimney in place of each side window given in Fig. 7. This he can do because his house is against his left hand neighbor's and his right hand neighbor's house is against his, so they all keep each other warm and need not be as particular about heat as the poor fellow living in the one room in our Fig. 2. He also puts a double door from his front parlor into his hall. The small room on his principal floor, the millionaire has provided with a door opening into the dining-room, and fitted up for his waiter, with china closets, a sink, and a lift communicating with the basement. The front room he uses as a parlor. If his father was as rich as he is —or rich enough, at least, and sensible enough to refine the son, the son, in nine cases out of ten, uses the back room for a library, and as a dining-room during the few hours when meals would prevent his using his books anyhow. In the tenth case, the refined man uses his front basement room. for a dining-room, and vulgar men frequently do, and have their billiard-rooms in the top of the house so that the players clattering down stairs late at night can wake up the children. We have said that the rich man dining in his basement is not *always* vulgar, and we have *not* said that he

always is if he has his billiard-room up stairs. The poor man, no matter how refined, has to do the best he can. Neither have we said that all millionaires in New York live in just such houses, or that millionaires are the only people living in just such houses. On the contrary, such houses are the prevailing type in New York and, for good reasons which we shall soon explain, seem to be making their way in other cities. On narrower lots the back room extends across the house, and at the end toward the hall has two closets (one containing the dumb-waiter from the basement) with an arched recess between them in which the buffet stands. (Fig. 10.)

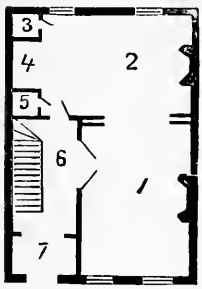


Fig. 10. 1 Parlor.—2 Library and Dining-Room.—3 Dumb-Waiter.—4 Recess for sideboard.—5 Closet with sink.—6 Hall.—7 Vestibule.

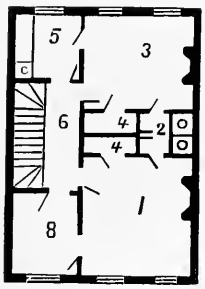


Fig. 11. 1, 3 & 8, Bedrooms.—2 Wash-closets.—4 Hanging-Closets. — 5 Bath-room.—6 Hall.

§15. The second story is generally like this, though the principal bedroom is also some times carried across the whole house, the stairs of course being carried farther back than in the plan. A small-room on the second floor is, naturally, used as a bath room. Space is frequently found for a closet at each end of the stairway between it and the so called "hall-rooms." Such a closet is generally fitted as a water-closet, instead of having the apparatus in the bath-room. Likewise on the first floor, room is often found for a watercloset with wash-basin between the stairs and butler's pantry. The third floor is like the second, and the fourth divided into more small rooms. Between the bedrooms, the closets are generally larger than represented in Fig. 8, more as in Fig. 11.

The only direct communication between the rooms is through the closets. Each room having two, one is provided with marble wash-basins and not unfrequently with bath-tub for feet, or even made into a regular bath-room, and ventilated through a well communicating with the roof.

§16. Residents of New York will probably feel amused at finding so minute a description of this simple and commonplace plan. Persons not familiar with New York may experience something of the same feeling, and are more apt to have it mingled with surprise that people of wealth anywhere get along with two rooms on their principal floor, and dine in one also used for other purposes. Such however is the fact, although extension rooms are coming more into vogue, and the front room has frequently been divided by pillars or an arch, or even two rooms made of it. Unless the house is on a corner, however, the middle room (unless arranged as below) is dark, and of questionable desirability. We have enlarged on this plan, because, for several reasons, after considerable experience in other cities, we believe it, as used in New York, to be not only the best plan, on the whole, for an average city house, but to contain many essential features of all good plans.

§17. Its simplicity is in its favor. The plans in vogue in several other cities, accomplish no more, and make much more fuss and expense about it. It provides what EVERY WELL PLANNED HOUSE MUST HAVE, and what most houses do *not* have, although they might as well as not, viz.: TWO LARGE ROOMS THAT CAN BE VIRTUALLY MADE ONE AND WIDE DOORS WHEREVER THEY CAN BE USED. The reasons for having such rooms are, I. to secure a reasonable feeling of breadth and openness in the house. It cramps character to be shut up in narrow spaces. II. To increase the amount of air ordinarily available for breathing and withstanding the deleterious influences of gas-light, furnace-heat, &c. III. To give an available space for social diversions, music, recitations, acting, and the circulation of people at parties. It is surprising how many palatial residences are scattered over the country, in which a large party is reduced to a knot of small ones, where the guests cannot find each other out, where two couples cannot get through a door at once, and where music played in one room, cannot be heard or danced to in another. One reproach justly cast upon America by Continental observers—that we are so sad in our amusements, and have so little social entertainment but eating and drinking, will perhaps be quicker removed if our homes are made more generally available for sprightly and intellectual diversions.

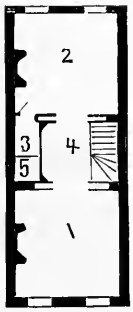


Fig. 12.

1 Parlor. —2 Dining - Room and Library.—3 Closet.—4 Hall.—5 Dumb-waiter in closet. This can have a sink in front of it.

§18. If a lot is too narrow to admit of even the plan of Fig 10, do not on that account give up the advantages of rooms *en suite*, and, above all, do not dine in your cellar, but submit at once to the English basement plan, and have your principal floor up stairs, and arranged somewhat like Fig. 12. Have a dumb-waiter come up two stories from the basement kitchen.

§19. Before leaving this subject of rooms *en suite*, let us consider a moment the chimney question as illustrated in Figs. 2 and 7, where the chimney is put in the middle of the house to save heat; and in a much exposed house in the country, such an arrangement is desirable; but it is a pity to spoil the rooms. Why not arrange like Fig. 13, though for our part, we

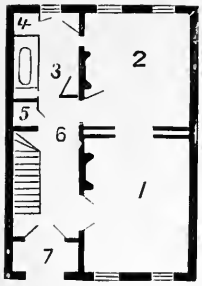


Fig. 13.

1 Parlor.—2 Library and Dining-room.—3 Pantry.—4 Dumb-waiter.—5 Water-Closet. — 6 Hall. — 7 Vestibule.

would put the chimney on the outside, just as is done in the city house, especially as it is much handier for the up stairs rooms. It will be observed that the arrangement in Fig. 7 not only does such fatal damage down stairs, but cuts the closet accommodation up stairs down to a minimum. For the sake of thus getting their chimneys into the middle of the house, and making as few of them as possible, architects are constantly sacrificing the important considerations we have named in § 17.

§ 20. Two rooms, so arranged, being provided, add what else you please. For three rooms in the midst of a city block, Fig. 14 seems the best arrangement, though Fig. 15 is used a good deal for narrow houses. THE PANTRY IN EITHER FIGURE SHOULD BE LIGHTED FROM THE CEILING BY A WELL 18 inches wide, extending the length of the ceiling and following the outer wall to the roof. By putting the bath-rooms of the successive floors over this pantry and the water-closets over the one on the first floor, windows from all can open into this well. Its opening through the roof should be arranged as in Fig. 2 of our article on VENTILATION. The kitchen range should be under the pantry, and its flue in the wall behind the well will create an upward current that will ventilate all the bath-rooms and closets.

§ 21. BACK STAIRS, AT LEAST FROM THE KITCHEN TO THE SECOND FLOOR, are *very* desirable. In houses of fair depth provision can be made for them at the rear of the pantry.

§ 22. In the country the other rooms can be added on in a variety of ways. We append a few designs, and will treat some generalities of the exterior in connection with them.

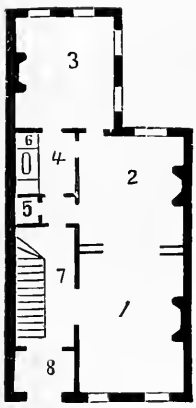


Fig. 14.

1 Parlor. — 2 Dining-Room.—3 Library, (best put here for seclusion).—4 Pantry.—5 Water-Closet and Lavatory.—6 Dumb-waiter.—7 Hall.—8 Vestibule.

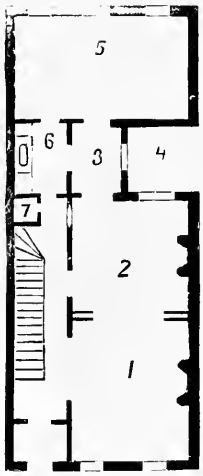
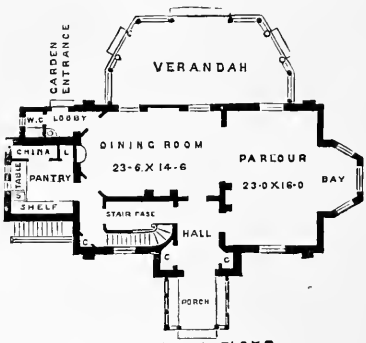


Fig. 15.

1 Parlor.—2 Dining-Room.—3 Rear Hall.—4 Well for light.—5 Library.—6 Pantry. — 7 Water-Closet and Lavatory.



PLAN OF PRINCIPAL FLOOR

Fig. 16.

Fig. 17. (Perspective of Fig. 16.)

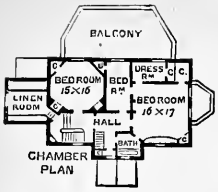


Fig. 18.

Fig. 19.

We annex above, the chamber and attic plans for Figs. 16 & 17, as their arrangement varies so materially from that of the principal floor.

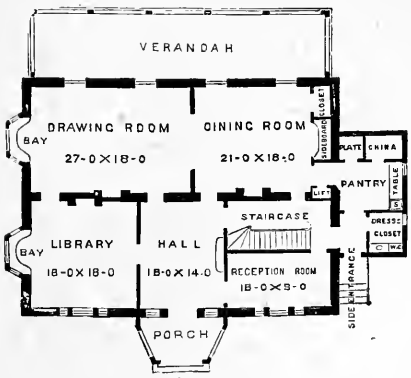


Fig. 20

§ 23. Fig. 20 is for a basement kitchen

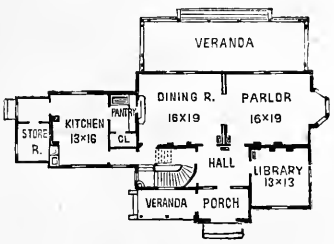


Fig. 21.

Fig. 21 is the same thing as Fig. 20 with

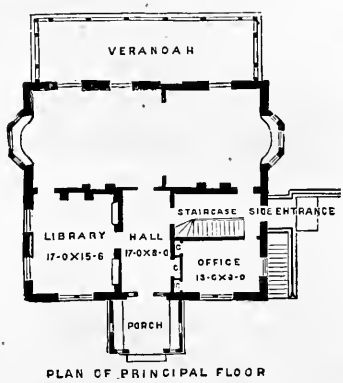


Fig. 22.

kitchen added, veranda in place of reception room, and the whole thing changed from right to left.

§ 24. On a hill-side, or when there is no room for kitchen, &c., on the principal floor, the outbuildings of Figs. 20 and 21 could be dispensed with, and Fig. 22 used. A lift would be needed in the dining room, and it should be arranged somewhat as in Fig. 10.

§ 25. The dimensions of Figs. 20, 21 and 22, differ so, that we append, in order, chamber floor plans for each.

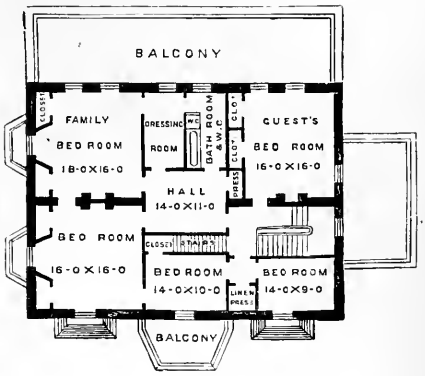


Fig. 23.

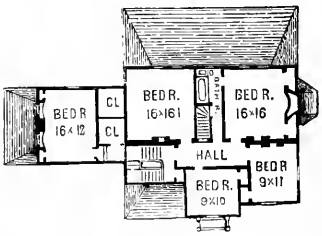


Fig. 24.

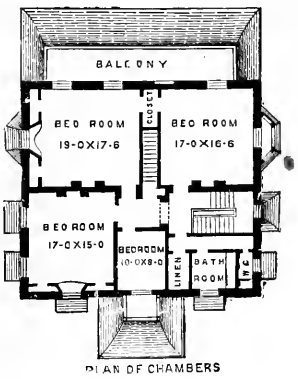


Fig. 25.

§ 26. For either Fig. 20, 21 or 22, an exterior could be had with a little ingenuity from either of the following figures.

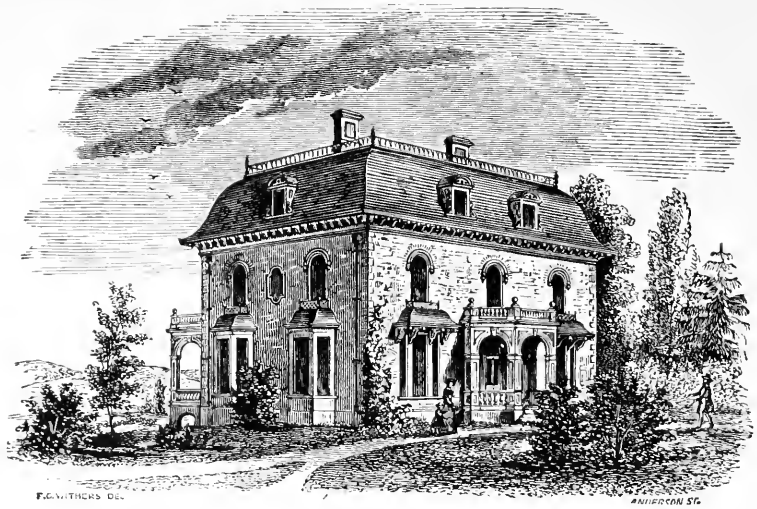


Fig. 26. (Perspective for Figs. 20 and 23.)

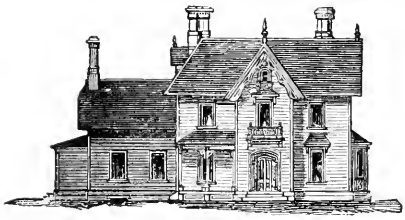


Fig 27. (Perspective for Figs. 21 and 24.)

Fig. 28. (Perspective for Figs. 22 and 25.)

The exteriors Figs. 26, 27, and 28 were for the three designs Figs. 20, 21 and 22 in the order named. We have purposely kept them separate from the plans, to illustrate to what a variety of exteriors the (virtually) same floor plan may be adapted; and also to impress the contradiction of the notion sometimes held, that a square house cannot be made into a picturesque house.

Fig. 29 illustrates the same thing. It will apply to all the designs from Fig. 7 to Fig. 11 inclusive.

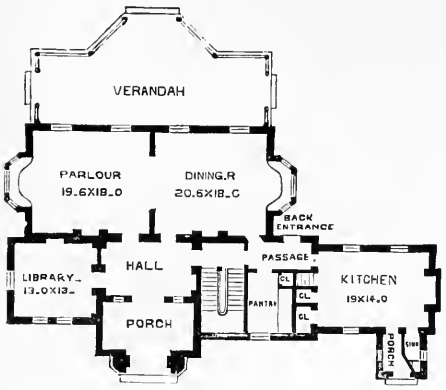


Fig. 30.

Figs. 30 and 31 are regarded as excelling in effect and picturesqueness, most designs for houses of the size.

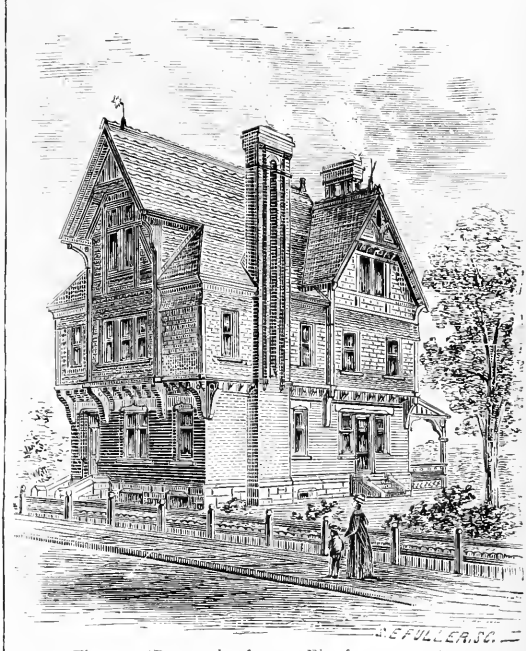
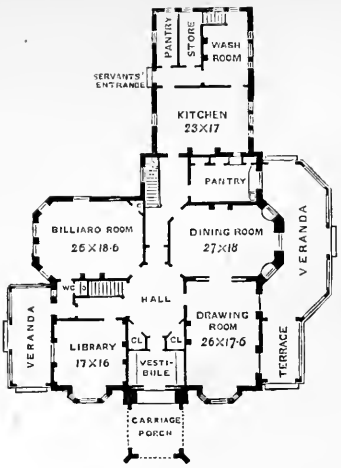


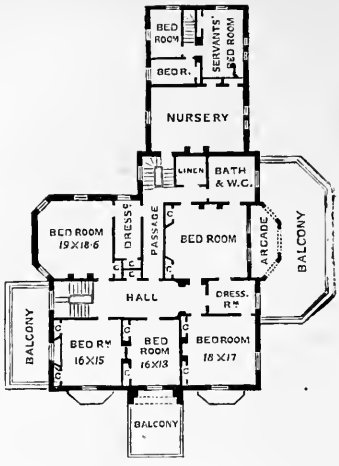
Fig. 29. (Perspective for any Fig. from 7 to 11.)

Fig. 31. (Perspective for Fig. 30.)



PLAN OF PRINCIPAL FLOOR.

Fig. 32.



PLAN OF CHAMBER FLOOR.

Fig. 32a.

Fig. 33. (Perspective for Figs. 31 and 32.)

§ 28. Figs. 32, 32a and 33 show more elaborate design, with suggestions for a large number of "conveniences on one floor.

Figs. 34, 35 and 36 show a house something of the same character, where the kitchen, laundry, &c., are to go in the basement. (The hints for these drawings were found in a house by Mr. J. C. Cady.)

One of the good features in Figs. 31 and 34 is, that the billiard table does not impede the free movement of people between any parts of the floor outside of the billiard room.

§ 29. We have so far, considered generalities of interior arrangement. We now proceed to some details.

The rooms most used should, of course, be put where the finest views are to be had, and pantrys, closets, etc., should not be placed where some other room might command an improved outlook.

§ 30. Where there is room enough it is well to have doors and windows placed symmetrically; but they should always be carefully located with reference to the furniture, by drawing the positions and dimensions of the furniture on the plan. Special care should be taken so to place windows and doors, that drafts can be had without going over beds and other furniture whose occupants would be exposed. (See §§ 9 & 11). Moreover, it is well to carefully indicate on the plan (bearing in mind the considerations just mentioned) the way each door is to swing, as is done in Figs. 9, 10 & 11.

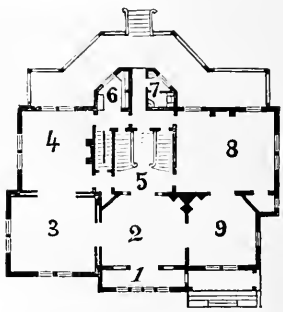


Fig. 34.

1 Vestibule.—2 Hall.—3 Parlor.—4 Dining-Room.—5 Staircase hall.—6 Pantry.—7 Gentlemens' dressing-room.—8 Billiard room.—9 Library.

Fig. 35. (Perspective for Fig. 34.)

31. **The hall.** Let the doors be symmetrically arranged and as large as possible, try to use folding doors into the parlor at least. For the reasons see § 17. A retrograde movement has been made and it is an exceedingly good one by which the Hall, as of old, forms one of the finest and, on occasions of ceremony, most useful rooms in the house, connecting, as it should, all of the principal rooms. Its necessary height (if advantage be taken of its upper stories galleried) its stained glass in staircase windows and others, its open fire with ingle-

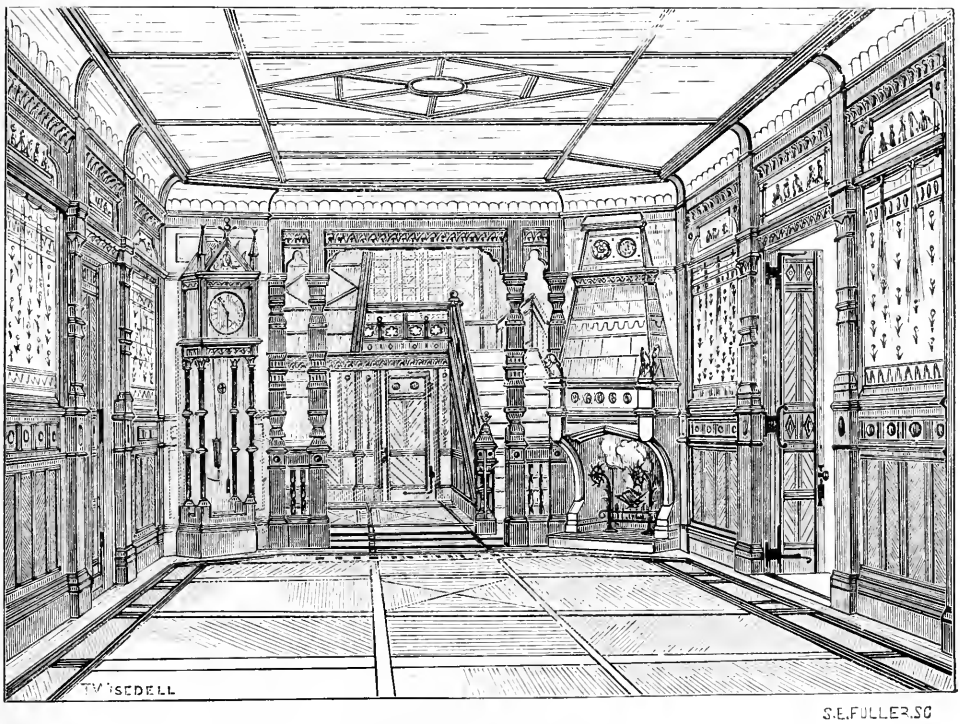


Fig. 36. (Hall for Figs. 34 & 35.)

side, (see § 36) so much read of but of late so little seen, its high clock and comfortable settles with high backs, sure preventative of draughts, all tend to weave around it the glamor of poetry until it becomes by its associations the one room, the first and last tie of home when the cares and vicissitudes of life necessitate a separation.

Fig. 34 contains ground plan for Fig. 36.

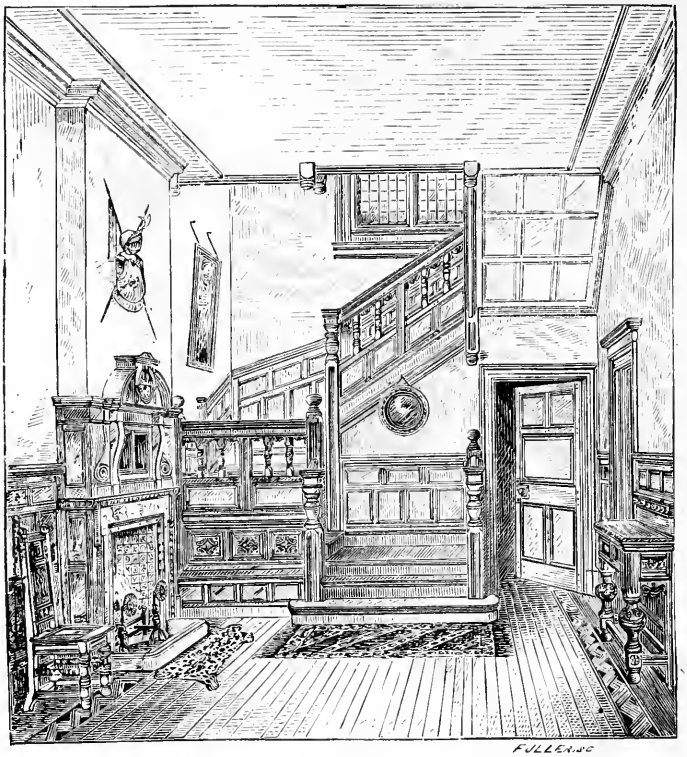


Fig. 37.

§ 32. **The staircase** should usually be entered under an arch or arcade as in Fig. 36 and not run into the hall. The arrangement of Hall and staircase, here suggested, may appear extravagant, but in a well considered plan is not so, as the pantry, china closets, etc., can generally be placed under the landing or immediately off it and a bed room can open from the landing, as a high ceiling to these generally small offices is not desirable. Again by the use of a galleried Hall and properly grouping the rooms around it, advantage is taken of floor space that is lost in a badly considered plan by useless passages often dark.

§ 33. A massive staircase going up in a large bold curve or as in Fig. 37, around two or three sides of a rectangle, with landings, is a fine thing and can be made of great effect. But a plain staircase at the end of a hall or in a niche at the side is not a pleasing object and much will be gained by placing before it a screen.

Fig. 38 is a suggestion, though it is too heavy for a moderate sized house.

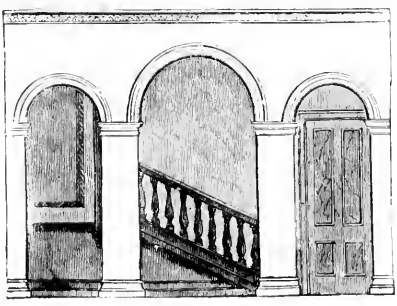


Fig. 38.

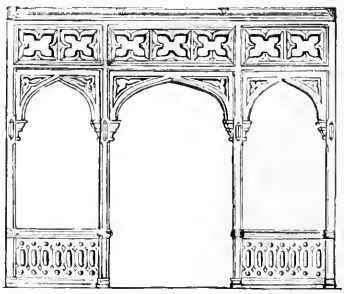


Fig. 39.

Fig. 39 is better for most places where it is apt to be called for.

§ 34. Staircases should always be of ample width with broad treads and low risers approaching to the inclined plane as near as possible; the treads may be of stone, marble, brick or tile and these should never be covered with carpet. Wooden ones may be, and padded to prevent noise. The handrail should be on both sides broad and moulded to accommodate itself to the hand and of convenient height, filled in with turned balausters and intermediate strings or they may be panelled. It is always desirable to keep the lower portion of handrails solid or with only a few ornamental perforations which help the sweeping. They are more pleasant for, ladies using them, and oftentimes prevents accidents to children. The landings should be frequent and ample, and the handrails always kept at the same level, even if newel posts occur at landings, on which they should always be placed, and not rest on the steps. Good effects may be obtained from windows having stained-glass being placed on first landing as in Fig. 36 or by arcades opening into conservatories etc. Gas fixtures may be sometimes introduced on the newel post at foot of or on landings, but is generally to be avoided as it is liable to give a contracted look to the staircase. Turned pendants and strings continued 4 in ches underneath stairs and formed into panels as a margin for plastering are good, preventing the bungling of the plaster cornice of the hall, and the plaster from falling off as it is apt to, sepecially at the junction with the outer edge of the wooden string. See the underside of the stairs in Figs. 36 and 37. The staircase of the second floor may, as before suggested, oftentimes be embodied in the design of a galleried hall, so as to be seen as a prominent feature from the hall on the ground floor.

§ 35. **Fireplaces.** Of late years the open fireplace has entered largely into the living rooms of American houses. They are always cheerful-looking, and serve as good ventilators.

They should never be relied on to sufficiently heat a large room in an exposed situation. Avoid fireplaces in corners of living rooms, they are ungenerous, as few can sit around them; and where it is possible, have your fireplace large and high, so as to be able to burn wood. On no account use the imitation of wood by burning gas, if (not to speak of honesty) you value your health, and care for the delicate colors of your furniture. Wood is always quickly lighted, cheerful, healthful, and if cedar is burned, aromatic, and has everything in its favor, providing the fireplace is large enough. Hearths should never rest on floor beams, but be carried on brick or tile trimmer arches, properly supported, and bedded in mortar, to guard against fire, the joists being stopped short of the chimney breast, and carried on heavier beams past the flues at side of fireplace opening.

§ 36. **Ingleside.** The proper way to thoroughly enjoy a wood fire is to re-establish the ingleside, which has of late justly found favor. It is a nook, large bay, or arched recess in the side of the room, capable of receiving a hooded fireplace, of size ample enough to receive the fire-dogs, back and other logs, on a hearth raised four inches from the floor. Over the opening should be a shew-board for plate, and at either side of the recess proper, a seat or high-backed settle, lit by small windows partly filled with stained glass. See Fig. 61.

§ 36. **Bay windows** are generally desirable, especially in exposures adapted to climate and scenery. In the bed-rooms, deep window recesses made by closets on each side and provided with seats are to be specially recommended.

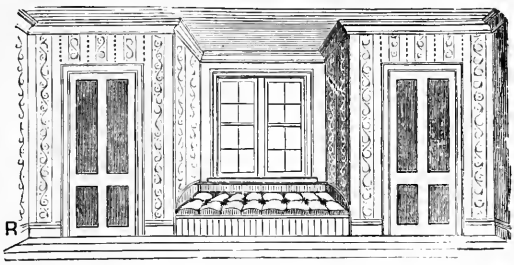


Fig. 40.

Fig. 40 is for a flat window.

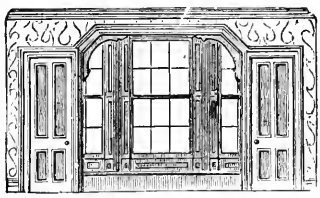


Fig. 41.

Fig. 41 can be used in connection with either a plain window or a bay.

§ 37. **Kitchen.** Don't have it so big that everything will be out of cook's reach, and that she will make it a store room; don't have it below ground if you can help it, because it is difficult to supervise.

§ 38. **Attic bedrooms** may be made very valuable in country houses. They generally command the best view. A high pitched roof with a flat on top, leaves but little of the ceiling exposed to the sun, and provides a good garret for storage. See Fig. 42.

§ 39. **Angles.** Keep the house as free from angles as possible, each indentation or corner on the foundation plan, always occasions the builder to add appreciably to his estimate.

Most of the hints that we find it practicable to give for the other rooms are elsewhere in this article, or in the articles on DECORA-

TION, FURNISHING, WARMING AND VENTILATION.

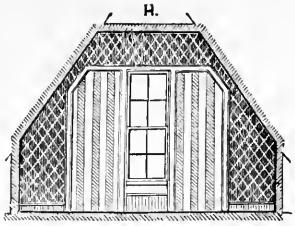


Fig. 42.

So much for the general interior arrangement. The details of interior finish, we leave till we come to speak of construction, and now proceed to

EXTERIOR ARRANGEMENT.

§ 40. It has seemed best to give designs of exteriors in connection with their respective plans, but we can readily refer back to them. As the details of a house depend so much on each other, they, of course, cannot be very strictly classified. If it is to be among other houses, its proportions can be high without looking stilted. We have not attempted and shall not attempt to give many hints regarding the exterior of city houses, beyond suggesting the absence of all ornament made up of purely architectural objects that have no use, and advising the application, so far as appropriate, of the principles given in the article on DECORATION. Even where good architects have attempted wide departures from the stereotyped city house, the result has often been questionable, and it is dangerous for novelty to be attempted by any but the most competent taste.*

§ 41. **Style.** To persons about building a house, almost the first subject considered is: "In what style shall I build?" The question of the so-called styles is fostered largely by the books likely to be conned as an aid, and also by the press in its descriptions of building lately executed; and this question of style and the endeavor to embody the remains of a bygone age, in which all the necessary requirements of modern life and climate were wanting, often lead not alone to incongruity, but to bad planning and a positive dislike to the house as an inconvenient home after it is supposed to be complete. For instance, a window the same in size and character as those lighting principal rooms is seen lighting and almost occupying a small closet; or because general features of houses made a century or two ago were good enough to be revived, some architects revive with them the tiny panes of glass which were *never* a matter *of choice*, but were merely the largest they could make at the time. Style (in the sense used above) never had an existence. All we see of the ancients speaks of *progress* in civilization and adornment and why we of the nineteenth century should go backward to any epoch and forget utility, and that too in progressive America, is a mystery.

§ 42. The position a house has to occupy, be it city or village, hill side, valley or rock in the mountain, each requires a different and distinct character in their several designs; blending them, as it were, into the scenery or locality that they are to occupy and taking advantage of their best outlooks as regards the scenery and, in cities, of the position for climatic influences.

On a level piece of land near the sea a far better horizon view is obtained by elevating the living rooms 4 or 5 feet, whereas on the hillside among trees, the lower the house is kept, (after attending to the ventilation of cellar) the more will it appear to grow into its surroundings.

We now consider alphabetically the principal details of the exterior, in order that the reader contemplating building may be guarded against overlooking any that he may care for.

§ 43. **Arcade.**—A recess on the outside of a building enclosed by arches and railings.

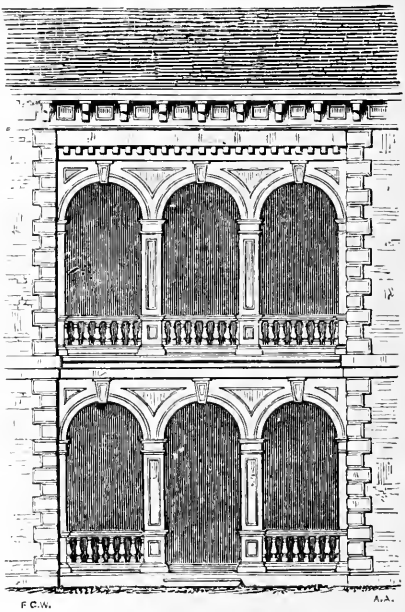


Fig. 43.

Where but a single arch is needed, it is called a recessed arch. Fig. 44.

Arcades and recessed arches, if wisely in-

* Accordingly as our treatment relates so largely to country houses many of the designs and ideas needed in this article have been found in "Villas and Cottages," by Calvert Vaux, (New York, Harper & Brothers) from which by the courtesy of the Author and Publishers, they have been taken. Figs. 29, 34, 35, 36 and 51 to 60 inclusive are by Mr. Wisedell who is the author of most of the matter on *Halls*, *Staircases*, *Fireplaces*, *Inglesides*, *Chimneys*, *Roofs*, *Windows*, and the entire department of *Construction*. His counsel, given at Mr. Vaux's suggestion, has been a greet source of "aid and comfort" in the preparation of this articla. Figs. 37 and 61 are from English sources. The rest of the figures (except 9 to 15 inclusive) are by Mr. Vaux.

troduced, always produce effective contrasts of light and shade. These arrangements are to be distinguished from porches and verandas, both of which project.

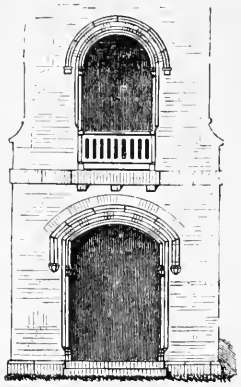


Fig. 44.

Being protected on three sides, they are preferable, in much exposed situations, to porches and verandas, except where breezes are more important in warm weather than protection in cold. Arcades provided with glass frames for winter, make well-protected conservatories. The sashes could be made portable.

§ 44. **Bay windows** are well illustrated in most of the exteriors already given. Fig. 45 shows a good arrangement for a bay window with a balcony on top.

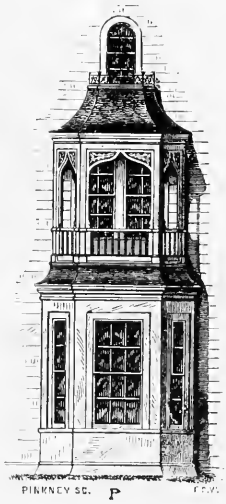


Fig. 45.

The balcony could be fitted with sashes to protect plants.

§ 45. **Balcony**.—A projecting platform from a door or window above the ground floor, illustrated over the bay in Fig. 17, over the front door in Fig. 27, over verandas in Figs. 26 and 31, and over the porch, veranda and bays in Fig. 33. A balcony is frequently supported like the one over the door in Fig. 27, on brackets from the wall instead of supports from the ground.

Carriage Porch.—See *Porch*.

§ 46. **Chimneys** may be made effective. Those in Figs. 28, 29 and 35 are worth noticing.

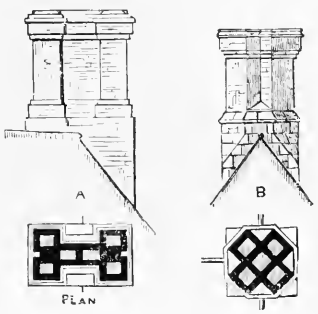


Fig. 46

Those in Fig. 46, are arranged for respectively, six and five flues.

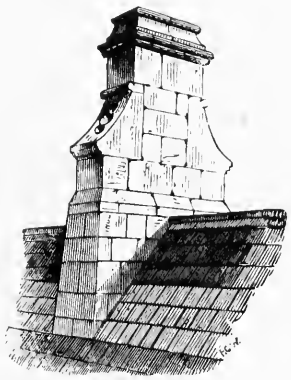


Fig. 47.

The one in Fig. 47, has ventilating flues on the sides.

Chimneys should be carried well out from the ridge of roof, but seldom intermediate between eaves and ridge. They admit of good treatment if placed in outer walls. All chimneys in such positions should have gables or ridges carried behind them so as to prevent the accumulation of snow, (see back of chimney in fig. 29), and this should be well studied in designing *all roofs*.

All chimneys that occur in outer walls should be built with an air chamber or space between flue and outer walls similarly to the hollow walls (see § 75). If this is done, the flue will not become chilled and no difficulty will be experienced in causing it to draw, and the heat will be retained. All flues should be built square 12 inches by 12 inches, so that a circular flue pipe of galvanized iron or baked clay may be

used to carry off the products of combustion and the angles in the left flue may be used as a ventilating flue from the several rooms containing fire places. Openings for this purpose should be made into the flue near the ceiling and covered with a wire guard. (The ordinary register fronts are bad for the reason that they have too much iron in comparison with the opening and are consequently large and unsightly). A heated flue forms the best known and most reliable ventilator, still no two rooms should have openings into the same flue on account of probable difference of temperature in the two rooms and consequent drawing in from one of them of the deleterious gases that it is desirable to be rid of.

Care should be taken to prevent any timbers from being built into flues and ordinary flues used for smoke should be pargetted and cored, i. e. plastered with a tenacious cement and the angles rounded off so as assist the exit of the smoke and prevent the accumulation of soot.

§ 47. **Cupola**, or observatory as it is sometimes called, is illustrated in Fig. 31. Taste and convenience both urge placing one on a tower where practicable, rather than raising it from the inside of the house.

On cupolas, exposed balconies in connection with a smoking room, tea room, or it may be a study, often add much to the exterior effect of a house, as well as being a convenience. This provided the house is sufficiently large to warrant it; as if not, it may become all tower and no house. Many very charming treatments of these features may be accomplished by the proper use of tiles or shingles.

§ 48. **Dormers** are windows projecting from the roof. See Figs. 26, 28 and 35. They are always picturesque when properly introduced.

§ 49. **Finials** are upright decorations in wood, iron or *terra cotta* surmounting the gables of either roofs, dormers, or porches. Sometimes their pattern is made continuous with that of the *verge-board*. They are illustrated in their more recent treatment in figs. 29 and 35.

§ 50. **Hoods** over doors and windows are a great protection from the rays of the sun and from storms. With a hood, the top sash can be lowered several inches without rain beating in. They also are very decorative if judiciously used. In Fig. 31, note the great hood over the balcony which surmounts the porch, also the one over the large window in Fig. 35. In a plain house, a hood over the door, with sidings running to the steps, is effective. See Fig. 48.

§ 51. **Ombras** or upper logias opening off one or at most two of the principal bedrooms are very convenient as they give effective shadows for exterior effects. See Fig. 35. under right-hand gable. They should always be covered by the main roof. A similar effect may sometimes be accomplished by an open balcony over a bay window or under the projecting gable of a house. All these effects require very careful design or they may prove inconvenient and unsightly.

§ 52. **Porch** is often confused with arcade, balcony, ombra and veranda. It properly designates a covered approach to a door. For illustrations see Figs. 17, 26, 28 and 33. The latter has a carriage-porch—such a convenience at night and in wet weather that it is surprising not to find in more general use.

§ 53. **Roofs**, it need hardly be explained, are very important features, both in effect and convenience. There is great latitude for picturesque effects which are often marred by the attempt to create too many features or breaks, which tend to give a straggling and weak effect, as though they were simply a collection of roofs instead of a roof. Harmony of detail and as far as possible continuity of eaves-line, except it is broken by large gables or a tower, will prevent this. For the better shedding of driving storms, roofs should be always steeper than an angle of 45 degrees (see Figs. 29 and 35 and study the roofs and gables in the other designs.) Note, too, the fact that in Figs. 26 and 28, the principal difference between two houses of essentially the same ground-plan is in the roofs. This feature is more seen (certainly in approaching) than any other outside of a house.

A roof with the gable cut off (see Fig. 6) is called "hipped." See *verge-board* below.

Shutters. (*See* under § 107.)

§ 54. **Ventilators** are always desirable and may often be introduced with great effect.

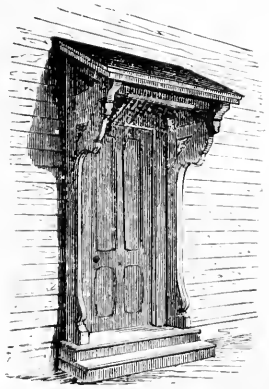


Fig. 48.

2.
Fig. 49.

4
Fig. 50.

For a dwelling, they look better rather nearer the gable-end of a roof than at the centre. In a stable, they are better where the ridgepoles join toward the centre of the building. The designs we have given or similar ones can be adapted to the plan in the article on VENTILATION, which see.

§ 55. **Veranda** is often confused with Arcade, Balcony, Ombra and Porch. It is a covered balcony on the first floor, and is illustrated at the front in Fig. 6 & 35, at the side in Fig. 33, and in the rear in most of the other exterior views.

It should never be forgotten that the roof of a veranda inevitably excludes some light from windows. It is therefore undesirable, ordinarily, to have a veranda extend entirely around a room, and, much more, around a house. Sometimes this difficulty has been remedied by persons wishing the veranda to surround a house, by having the veranda and, consequently, its roof, made narrow. This remedy is, if anything, worse than the main difficulty. If a veranda is worth having at all, it is worth having so wide that a group sitting need not be disturbed by a group walking, and that a hammock need not take up the whole of it. Sometimes the difficulty is remedied as to the lower rooms, by having the veranda roof start from a floor higher than the second. In crowded buildings like summer hotels, where much veranda room is needed, this seems the best plan, on the whole, especially as during the summer season, what light (and heat) this arrangement would exclude from sleeping rooms, can well be spared.

The veranda of a private house should not be less than ten feet wide, and in many cases had better be thirteen—the usual length of floor-planking.

§ 56. **Verge-board**.—A decorated board under the end of a gable. See Figs. 17, 28 & 35.

§ 57. **Windows** seldom receive the attention in design that they deserve, and are generally designed as though it was necessary to keep them all alike, both in size and detail. This is a most fatal error, not alone for picturesque considerations, but for convenience and economy of space. Windows should always be adapted to the size and position of rooms, and ingenuity and circumstances will suggest many special arrangements. Windows in most living rooms, unless carried to the floor, should have sills of the right height to hold a book or work-basket, and should go up to within at least eight inches of the ceiling, so that the upper sash may serve as a ventilator, and an expansive airiness may be given to the room; but from the general clearness of the air and brightness of the sun, it is frequently objectionable to have them filled entirely with plate or other clear glass. Hence the prevalent custom of closing blinds.

§ 58. A much better method is to have clear large glass in lower sashes up to 7 feet from the floor, and the upper portion of glass slightly tinted, cut and formed with lead bands into designs and emblazoned with crests, or figure subjects. Too much color should always be avoided or they will appear tawdry. The design may be carried also down the sides of plate glass, but not at the top and bottom, on account of its weight needing the sash frame for security. These points are illustrated in Fig. 51, which is a suggestion for an ordinary

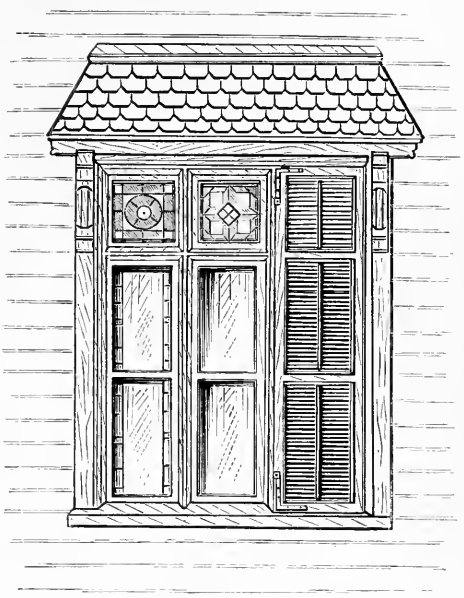


Fig. 51.

window with a mullion. (Of course this unsymmetrical design is not intended for an actual window, but merely to illustrate the points under consideration.) The upper sashes, protected by the hood, are intended to be hung on centres; the lower sashes (one shown with lead ornament at sides, the other without) are arranged with weights and sash cords, all on one side, so as to keep the mullions thin. Other forms of windows will be found in the accompanying perspectives of houses, adjusted to suit varying conditions. (See especially

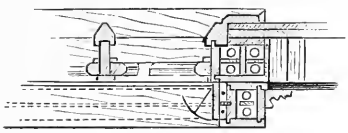


Fig. 52.
Plan for pulley boxes, sill, &c.

Figs. 6, 17, 29, 35 and the bay in 61.) It will be noted that very few of these windows are of the same size or design.

§ 59. Double glass may be used in a single sash, if it is rabetted on both sides (Fig. 53); this forms an air-space, valuable for deadening street noises; also preventing loss of heat.

§ 60. When windows open on to lawns or balconies and are used for egress, good head room should always be allowed by using

a travelling head in the sash frame; but in positions where this is not practicable, French casement windows should be used, their sashes being hung similarly to doors; and if the precautions are taken in the make of frame and sash that are taken in France and Canada, the ill name they have would speedily vanish. In Montreal and Quebec, where the seasons are far more severe than here, they are generally used, but always have a small groove in the frame and centre of sash going all round;

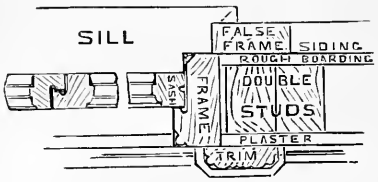


Fig. 53.
Plan of French Window.

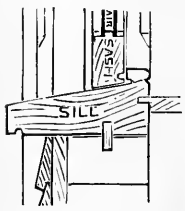


Fig. 54.
Section of French Window.

thus, if water should drive in, it will find a channel prepared to carry it away, —this is also well to do in the bottoms of sashes that are hung, and in the sills. If this is done, no more complaints will be heard of wet driving in. Outer sills, too, should be grooved, to prevent the mass of water falling on windows running down and streaking the paint.

§ 61. Another form of window, executed in the Brooklyn Park, is one with large sashes, from 6 to 10 feet long horizontally, filled with glass, leaded in or stained or with figure subjects, arranged with wheels and balanced so as to travel easily in the frame. The blind is arranged in a similar manner; these slide either down below the sill or up into the head. The space occupied by such a long window should be divided by turned columns, with cap-band and base; thus an appearance of freedom is given to a room, and such a window is very desirable in locations where good scenery is to be had.

§ 62. If extensive views are to be had in positions where it is not desirable to have windows, from proximity to the necessary offices, or for lack of furniture space, a window or panel formed of one clear sheet of glass, and arranged with a frame similar to a picture gives a pleasant effect. By its means an ever-changing landscape may be obtained. This should never be attempted except the scene be free from active life.

§ 63. Sashes can be arranged on centers, to swing horizontally or vertically. The horizontal is a good method when applied to the small upper sashes of mullioned windows. (Fig. 51.) They serve as ventilators, and should be arranged so as to open with the bottom out, to prevent the rain driving in. The vertical method can be used occasionally in sheltered positions, as almost the whole of the window may be thrown open, but this is fatal to any arrangement of blinds except when the walls are very thick.

CONSTRUCTION.

I. Stone and Brick houses.

§ 64. **Getting a dry foundation.**—After the site of a house has been chosen and the plan determined on, before a foundation stone is laid the whole area and one foot outside the extreme limits of the walls should be excavated (whether there is to be there a cellar or not) to a depth of 12 inches below the bottom of the intended foundation and the whole area covered with a good concrete formed of 2 parts of sand, 4 of broken stone in about 1½ inch cubes, and 1 of good cement, with sufficient water added to make it a fluid mass. This is to be evenly spread over the whole area and trowelled off with good cement. Where cellars are desired, this will form a good floor.

§ 65. **Sub-Drain.** Should the subsoil show any signs of saturation, or be filled in, it is well to lay a course of agricultural tile of 2 inch diameter under the concrete before it is spread. (If the house is over 30 feet wide 2 lines should be laid.) These should be laid to a fall and connected with the drainage system. Where the houses have a sandy or gravelly subsoil these should be invariably laid. This, if properly done, will prevent dampness and the deleterious effects of surface water or drainage from being sucked under the house as is often the case when it is heated. It has been the cause of houses being unhealthy, especially in cities where noxious exhalations from gas and sewer pipes are continually being drawn in.

§ 66. **Foundation walls.**—After laying the concrete under the whole area, the foundation course of good size, and spreading at least 6 inches on either side of wall, is to be laid of large stones well bedded. On this the wall below ground level is to be built of fairly squared stone well primed up with small pieces of stone and well grouted with liquid mortar so as to make a solid wall. The outer face of the wall against which the earth will be filled in should be trowelled with good hard cement ¾ inch thick and it should be allowed to set hard before the earth is filled in. By these means, and reasonable ventilation, a perfectly dry cellar will be obtained.

§ 67. **Damp-course.**—At the level of the ground or just under floor joists, either a course of slate laid as if on a roof, breaking joint and bedded in cement, or a layer of asphalt or some one of the several vitrified damp-proof courses should be used. This will prevent the moisture rising up into the walls by capillary attraction, rotting the floor joists, etc., and engendering the growth of wet rot. (See Fig. 58.)

§ 68. **Cellar under Hall.** In extremely cold

places it is well not to have a cellar under the main hall of the house, but an arrangement of flues conveying the smoke and lost heat from the furnace under the floor, and in brick or stone houses 3 feet up the side walls, of the hall. The floor being of tile will become gently heated. If a cellar is desirable under the hall, the flues may be formed of concrete or Tiel lime patent blocks, carried on rolled iron beams. This method of heating has been found in the northern countries of Europe in all the remains of villas where the Romans founded settlements after the conquest. If the hall is warmed, from its generally central position most of the house will be benefitted.

§ 69. **Laying stone.**—In cities the use of stones for face work, base course, sills, jambs, window and door heads, and ornamentation, is very desirable, providing the stones are laid on their quarry beds (*i. e.*, with the grain running horizontally), and are of good size in the wall. The pernicious effect of standing thin 4 inch stones on end is already seen in many brown stone fronts in New York and in cities where it has been done, and in a few years will be still more apparent from the frost entering the stone and throwing off the laminated surface and from the erosions of the elements; for if water will carve its way through masses of stone laid as nature formed them, how much sooner must we expect to see its effects from a defiance of natural laws.

§ 70. In the country, it is generally found possible, either from boulders or from local quarries, to obtain a good enduring stone for walls. The rougher uneven colored parts of this may be used for the foundation and walling up to ground level, and the picked stone of even color and texture can be reserved for the portions above the ground or up to the second floor which may be wood or shingled similarly to that shown at fig. 29 the lower part of which is supposed to be built of brick.

§ 71. **Base-course.** About 12 or 18 inches above the first floor joists, it is generally better to set the wall back 2 or 3 inches as a plinth or base course. This may be formed with a row of bricks set on edge with the outer angle splayed or chamfered off or it may be of stone similarly worked and bedded with equal beds in long lengths. (See Fig. 58)

§ 72. **Walls** are generally erected 20 inches thick and they should be built of stone picked of an even color laid either with random joints or coursed rough ashlar or with angular beds. This last is the most expensive, although if stones of another color and of sufficient size be used for door, window, jambs, and at the corners in angular bedding, it has a very good effect, otherwise it will look weak and unstable. All stone used for face work should be left free from tool or drill marks which destroy the evenness of surface and color, and should not be too evenly trimmed on the surface, as the rougher the face, if free from tool marks, the greater the diversity of tints value from the shadow creating. If the stone be dark grey, red bricks may be used as a trim-

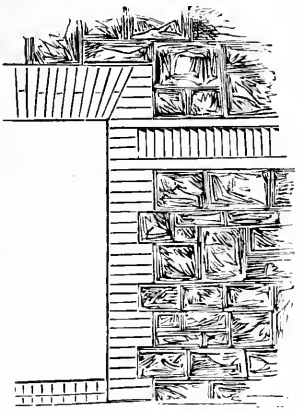


Fig. 55.
Random Rubble Ashlar with brick quoins.

ming in a variety of ways, at all the openings and angles. Strings (*i. e.* horizontal lines) of

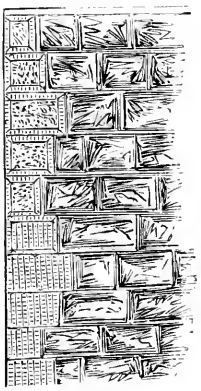


Fig. 56.
Coursed rough ashlar.

brick either laid flat or vertically (See Fig. 55) may connect windows, &c., and so bind the work

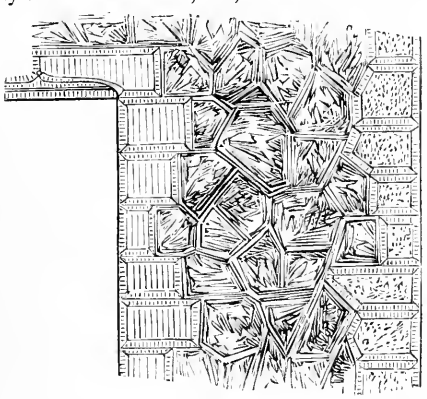


Fig. 57.
Irregular Ashlar. Coursed quoins. Corner in angular bedding.

together ; for if a different material without strings be used as a trimming, the effect of windows and doors is likely to be lonely and spotty.

§ 73. On houses of this character, where the winter is not too severe, ivy may be introduced and is desirable. Its glossy foliage climbing over the roughened surface of the stone softens it, and makes a beautiful contrast with the grey and red of the stone and brick.

§ 74. **Brick walls.**—A house can be built in cities generally of a good, local, sound and hard, well burnt brick picked for face work so as to obtain an even color; or if a finer face is desired, either Baltimore or Philadelphia pressed brick for red, or Milwaukee brick for yellow, may be used; and it is hoped that where they are used in houses built to remain, the pernicious use of half bricks as a fronting and the loss of bond (*i. e.* mutual support by interlacing) occasioned thereby will not be allowed. It should be abandoned, if not for honesty's sake, at least on account of the future. Brick walls for external use should never be less than 12 inches thick.

§ 75. **Hollow Walls** should be 8 inches of outer wall, 3 inches space and lastly 4 inches

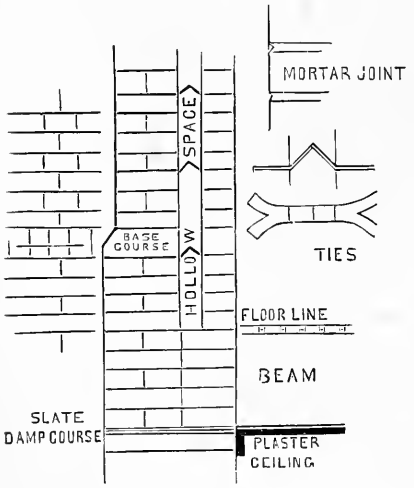
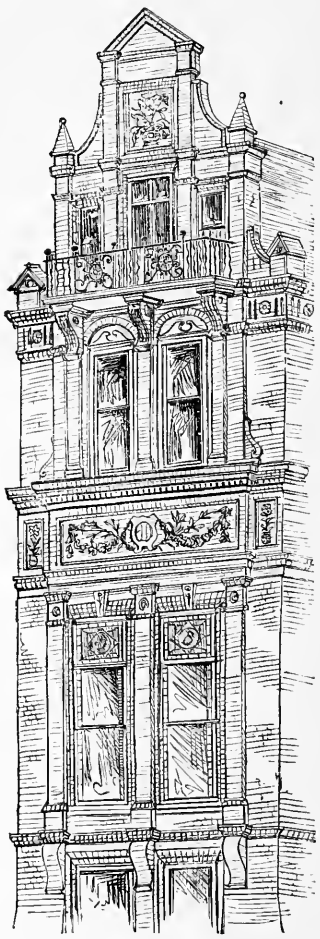


Fig. 58.
Section showing proper arrangement of Hollow Wall etc.

of brick, well tied together with purposely made tarred or galvanized iron ties higher in the centre so that the water may not be able to find its way from wall to wall over the ties ; for this reason slate ties or brick laid as ties are objectionable and should never be used. If from motives of economy it is undesirable to build a hollow wall all around the house it should be at least on the side most exposed to storms.

§ 76. In building hollow walls, care should be taken to leave openings in the base of the walls so that the air chamber may be cleared of the refuse mortar that is likely to fall in during the building of wall, or it may otherwise become a reservoir of dampness. After they have been throughly cleared, the openings should be built up to prevent the ingress of vermin.

§ 77. **Furring Walls.**—Brick or stone walls of houses are better conductors of heat than wood, and are, if permanently occupied, cooler in summer and warmer in winter. Outer stone walls with interior plaster directly on, have, however, the disadvantage that they collect the humidity from the atmosphere which is condensed on the inner face of the wall, rendering the rooms unhealthy, and damaging the furniture and paper hangings. Hence the necessity of hollow walls and also for furring out or leaving a ventilating space between wall and plaster. This is generally done by nailing strips 2 in. by 1 on wooden bricks or plugs built in the wall, and laying the lathing for plastering on these.



§ 78. **Ornamental brick work.**—Good effects in city buildings may be had by brick corbeling out and the use of moulded bricks in strings, lintels, jambs of doors and windows, cornices, chimneys, etc., and some good, evenly, well burnt bricks such as the Collamore brick may be carved and in panels and strings will have an exceedingly harmonious contrast if nothing

but brick be used. This is now being done largely in England. The carving has to be well studied in low relief to adapt itself to the material, the brickwork being built up with ordinary jointing like the other work, and carved when the mortar has set.

This carved brickwork may be seen on a house by Mr. Wheeler Smith in 57th St. between 5th and 6th Avenues, New York, and some other good use of brick on a Mission building (also by him) on 35th between 1st and 2d Avenues. There should be more of it. Its beauty is in its shades and color, which the woodcut cannot give.

§ 79. **Pointing up** of all brickwork should be with a neat trowel-struck joint *while it is being built*, because of the mortar going the whole depth of brick. (See Fig. 58 at right upper corner). It is the stronger and more weather-proof joint, for if the joints are raked out in the usual manner and pointed up *after* the walls are all built, and it is not very carefully done (which is almost an impossibility) the frost is likely to get in any cavity that may be left and throw or loosen the sham pointing. Moisture is then allowed to creep into the wall and slowly but surely ruins it, causing in some cases the disintegration of the face of brick. White tuck pointing and other fancy jointing which protrudes beyond the face of the brick should never be used as it will not stand the frosts prevalent in the Northern States.

§ 80. **Cement** in pointing red brick is most desirable of a dark color, and may be readily formed either with black Munich cement or Indian red pigment mixed with ordinary mortar. Also the dark moulding sand obtained from iron founders, if mixed with a good cement, produces a very pleasing, dark colored, durable mortar that harmonizes well with most of the red bricks used.

§ 81. **Stone courses, jambs, etc.** Good effects can be had from bands of colored stone in base courses, cornices, moulded strings, jambs, and window and door heads built in with the bricks, the several features being designed to accommodate themselves to the heights of certain courses of brickwork so that they may be discontinued, if thought desirable, without interfering with the bond of brickwork. In the use of brick and stone, glaring contrasts of color should be avoided, as they tend to divide the building into small layers, or panels as the case may be. Blue stone, brown stone, and often times local rough stones will blend in with the color of the bricks, and a modest and unpretending result will be attained. In large pretentious buildings, stone as light as Ohio may be blended with brick. With good judgment and proper massing it will be satisfactory, but it should never be attempted in a small house.

§ 82. **Pipes, doors, etc., in walls.** In a brick or stone house, provision should be made for all gas and water pipes by leaving a chase or channel in the wall, and if the house is at all large, they should be provided with a proper shaft so that they may be readily attended to, without tearing up wood work to hunt for a difficulty. In all cases where pipes are exposed to danger of freezing they should be either boxed up with sawdust or covered with incombustible felt. Sliding or boxing shutters and doors should also have their proper provision in the walls; a want of thought in these small particulars not only creates considerable cost but mars the best rooms in the house.

II. Wooden Houses.

§ 83. The same general principles of exterior apply to all wooden houses, however great may be the apparent difference in outward design at their completion. A much greater freedom of grouping and massing of features may be attempted than in building with stone or bricks.

§ 84. **Foundation and base.** After the excavation and preparation of a concrete bed as before described in § 64, the foundation and cellar walls are built to the height above the proposed finished grade line that the position or site of the future house demands. A damp-course (§ 67) of slate or asphalt is laid under the ground floor joists and they are well pinned up level, and the spaces between built up with stone to the floor line, so as to prevent vibration of the whole frame, which is often occasioned from a want of this precaution.

§ 85. **Frame.** On the joists go the chesnut or pine sills, carrying the pine corner posts. These are the full width of sill and are tenoned in and pinned with hard wood. These corner posts receive the plates or heavy beams carrying the upper floors and roof, with filling in studs for outer walls and partitions, which should be of pine, but may be of spruce, and are also framed or notched into the sill and plate. These are diagonally braced, and if the floors are high they are also strutted with short pieces put between studs horizontally. All the necessary openings for doors, windows, &c., are left with double studs where large timbers are not required.

§ 86. **Covering.** The outside of the frame is first covered with inch boarding laid diagonally, and on this is put felt, paper or other waterproof material. Sometimes cleats are nailed midway between the studs and inner laths, and plastered one good coat. This method is more expensive, but is very desirable on account of the two air spaces, which conduce largely to the warmth of the house. Then comes the false frame forming the finished corners and defining windows and other features of the design. This should never be less than 5 inches wide. The spaces left may be covered with tiles; cut and plain shingles of cypress, cedar or pine soaked in oil slightly stained; or with weather boarding not over 5 inches wide, it being desirable to obtain as

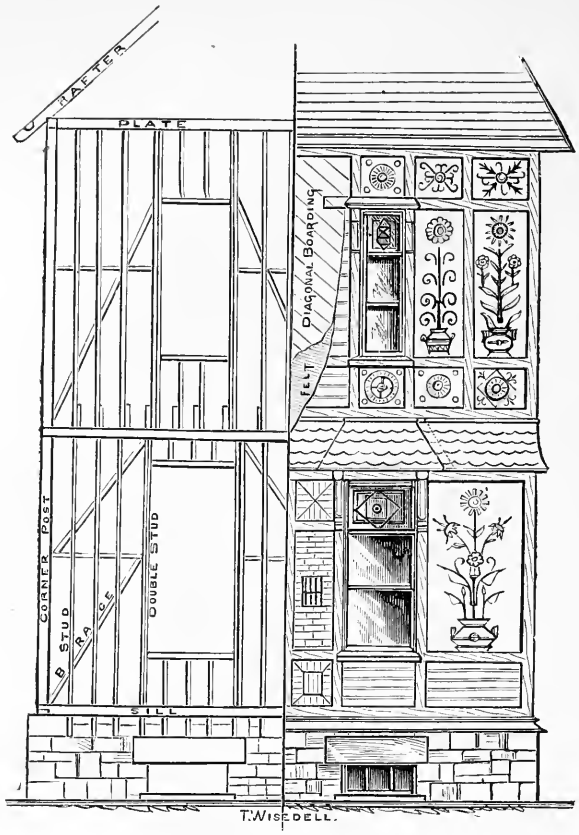


Fig. 60.
Framing and various styles of covering for wooden houses.

many horizontal lines as possible in a building without giving it a weak or wiry effect.

There are other methods of covering the outsides of houses, such as the four following:

§87. **Concrete slabs** with moulded ornaments, which may be had in a variety of colors, and good combinations obtained. They are screwed directly on to the studs. In the general plan, the dimensions of the slabs must be considered. Examples of this work were on the New Jersey buildings at the Centennial Exhibition.

§88. **Brickwork filling**, in patterns, may be employed between the timbers. In this case the timbers should be of hard wood and grooved to receive the bricks. This filling is not to be recommended in positions much exposed to moisture, as the bricks are apt to absorb it and rot the timbers.

§89. **Plaster filling** can be spread on a background of reeds, or "wattles," which should have *the bark on*, so that the moisture from the plaster will not expand the wood and throw things out of shape. This filling is best in coves and other positions not much exposed. Intaglio decorations may be scraped in the plaster, as shown in the cut, and afterwards colored. Very pretty effects can be had by sticking necks and bottoms of bottles into the *damp* plaster so as to form patterns. These can be arranged either in arbitrary patterns or to represent flowers or plants cut in the plaster. The play of light on many-colored glass so exposed is often very beautiful.

§90. **Sgraffito** is a modification of plaster-filling, where layers of different colors are put on, and the scratching made deep enough to reach the various colors as desired, just as cameos are engraved. Specimens of this, centuries old and still in good condition, are to be seen in Italy.

§91. The two foregoing methods are almost untried in this country. But they are successfully used in England, and there is no reason why they should not be here.

§92. **Rough-cast**—plaster with gravel thrown on it, is not unknown here, but it is generally used to cover the entire walls of inferior buildings. Tastefully introduced in panels, it could be advantageously used in good houses. It should not come near to the ground, as it would soak up moisture.

§93. **Roofs** may be covered with flat tiles nailed or plugged on battens, and well plas-

tered on the underside in lime and hair to keep out weather. Slates, if of good quality and color, such as Pennsylvania black, or Vermont green or red, are pleasing. They should be of small size and to be waterproof, laid with a lap of at least 3 inches of the first slate under the third, and secured by copper or composition nails. Slates of different colors in bands or diamonds, and all fancy slating should be carefully and judiciously used, as they generally give an effect of the roof being in layers or parts and destroy unity which is the first necessity of a roof. For this reason, if any decoration be desired, slates of similar color cut to an agreable form will be found decoration enough. Slates should not be used on frame houses as they are apt to give them a stiff look and seem out of place; a cedar or cypress shingled roof (painted if preferred) will last longer than poor slate and can be made more effective.

§ 94. **Painting** of a wooden house is of great importance. Every country house should have at least three tints. This variety costs but little more than monotony. The trimmings of the roof and openings, and the verandas, etc., should be of a color or shade gently contrasting with the main walls. The solid parts of the shutters should be of a third tint not widely different from the first two, and the movable slats of a fourth, much darker than any of the others, as the effect of the openings they cover is always dark, at a little distance, and if it be covered by a lightly tinted shutter, the house will produce a feeling as if it were without windows. (*See* PAINTING *and* PIGMENTS.)

INTERIOR FINISH AND DETAILS.

§ 95. **Floors.** Floor joists should always be of the proper size to span the floor space, with larger turning joists at all openings, and double under all unsupported partitions. They should be strongly cross-braced with 2 inch by 2 inch stuff every five feet to make them rigid. After this has been done, cleats are nailed on the joists 3 inches below the floor line, rough boarding is laid, and on this, deafening formed of concrete or clay is laid. Hard wood floors should always be of narrow boards ½ to ¾ inch thick and arranged with a square border accentuated in design at prominent points around the room; and the spaces occupied by doors, windows etc., should have separate designs and the border should not be run into a bay. The centre space may be filled in with flooring laid diagonal and square in different compartments, the whole making a design. (See Fig. 36.) It should always be considered as being covered with a rug on account of the difficulties of keeping floors in good order, clean and bright. Great difficulty will be found if proper provision is not made in laying the floor for expansion and contraction, as during the summer the joints will be crowded up and irregular on the surface, while during the winter from furnace heat they will be wide open.

§ 96. **Ceilings** should always be cross-furred before lathing, largely preventing the cracking and displacement of plaster; and side walls are usually furred off for lath and plaster.

In the country and in small or cheap houses avoid high ceilings and instead of the bare and cold plaster expose the floor beams which should be more carefully finished, allowing the cleats and boarding supporting deafening to be seen. In such cases use a large beam to carry the general floor beams, instead of cross bracing.

§ 97. **Plastering** a house always requires the most careful supervision both in the preparation and quality of the materials used and in the lathing which is generally not sufficiently supported or nailed and is often the cause of cracks. The less hard finish on walls, the better, and especially for surface decoration the walls should be sand finished, which gives texture to the work just as rough paper does to a water color drawing.

§ 98. **Doors** at the entrance should be of liberal width, and are generally better if formed of two leaves or doors. If it is possible, have inner or vestibule doors, so that the outer door may form a storm door, and fold back into a panel arranged to receive it. The outer door should always have small glass lunettes, to light the vestibule, of a decorative form, protected by bronze or other screens. The door of the vestibule should be treated as a screen, and be almost all glass. Sometimes they are protected with bronze or iron guards; though not usually.

§ 99. Generally, doors leading to the principal rooms are made too small. They should, if hinged, never be less than 4 feet wide, in two leaves, so as to admit two persons comfortably on festive occasions; if sliding doors, never less than 6 feet wide. Bed-room doors should always be large enough to allow furniture to be easily received into the rooms.

§ 100. In the designs for doors there is great room for improvement, by the introduction of more panelling and surface carving in the solid wood, and less of the objectionable, cheap, applied ornament stuck on to simple forms. Large panels formed of thin veneer, arranged so as to similate expensive woods, with poor mouldings and carving stuck on, are disagreeable not alone as shams, but from their tendency to destroy proportion. If reed mouldings or other small ones are worked the entire length of the style in the wood itself, and arranged with butt joints (not mitred), a pleasing effect may be gained. These are not any more expensive than the mouldings generally in use, as the mouldings may be machine-run. Panels, if in one piece, should never be secured by nails in door-frames, but allowed to have freedom for expansion and contraction of fibre. In the so-called hard wood doors, it is better with most woods to make them of two thicknesses over a pine core; this prevents the buckling and twisting of the door-frame.

§ 101. Cabinets or book-cases may sometimes be placed on wheels between rooms, and serve as folding doors. In a crowded library, for instance, such an arrangement can be of great service. The rolling book-cases would project their own depth beyond those at each side, and in folding back against them make an even surface.

§ 102. Sliding doors should be used where doors are too wide to fold without using valuable space in the room. They should have the best fixtures that can be obtained, and be hung from above on friction rollers, to relieve the rolling-ways in the floor. This method of fixing may be more expensive at first, but is reliable, and will be found in the end the cheapest.

§ 103. In the matter of ironmongery of doors, good effects can be had, and strength added to the doors, if strap hinges of wrought iron be used, as they admit of much good decorative treatment. (See Fig. 36.) Locks, bolts and escutcheons are all necessities, and this being the case, why should they be hidden instead of being made valuable constructional ornaments? Some improvement has been made in the bronze-work of late, but from the want of plain surface it appears cheap, suffering from the attempt to obtain more ornament from a small object than it is capable of properly giving.

§ 104. **Cornices** should be always formed of small mouldings and be free from applied stucco ornaments. Ribs on the ceiling, if introduced, should be kept very flat and be continuous with the cornices, so as to appear to belong to it, and where centre ornaments are used let them be small, shallow and circular, or square, plain and free from leaf ornament so as to form the nucleus of color decoration if any is to be used. See Fig. 36.

§ 105. **Blinds and shutters** may be comforts but are frequently made a discomfort. Their arrangement and material should be studied to meet varied requirements. Outside window-blinds are usually made light, and fall back on the wall. For this reason they are very weak if not tied at the angles with strap hinges or angle-pieces. They should always be provided for in the exterior designs, and this can be readily done (see fig. 51) with little extra expense, preventing their slamming and destruction. In the figure, the blind (thrown open) lies in an extension of the false window-frame, and flush with it, so that the wind cannot get between it and the house, to slam it to, and the weight rests on the sill.

§ 106. They are often arranged inside, hinged in two heights and folding into boxes arranged to receive them. It is generally well to have the portion exposed to the room when shut, panelled so as to form part of the design of the window-frame, unless the whole blind is needed to be slatted. Blinds or shutters may also be arranged as on plan, Fig. 52, in which they are shown hung with cords and weights, like sashes, and going down below the sill in two or three heights; after they are down, they are covered by a flap, and a small panel, the height of the window, swings around and covers up the sash, cords, &c. They may be similarly arranged to slide up into the head; they may also slide sidewise into pockets formed in the furring off, or thickness of the walls, in a like manner to sliding doors. In large houses, they may be arranged to form a design, or have large mirrors, and all the shutters in a room may be arranged so as to close or open simultaneously. In large rooms used for ceremony or public halls, this is sometimes desirable.

§ 107. A movable shutter, either outside or inside, may be formed of steel, iron or wood slats, arranged to coil up over the head of the sash-frame. This is sometimes advantageous, as they may be formed into hoods by the use of a stay-bar.

§ 108. The iron-work of sashes and blinds should be the best the market affords, as this first expense will often prevent a great deal of annoyance and ultimately greater expense.

§ 109. **Awnings** of striped canvas are desirable in some positions, and often add much to the cozy look of a house. They should always be provided for in the design by pockets in the head of the window, or they will have a disagreeable look when not in use, and soon be destroyed for want of protection.

§ 110. **Screens.** Japanese bamboo or wire-gauze screens, both of which can be seen through from the room but not from the outside, unless the light inside should be greater, are sometimes desirable. The sash-frame should also be arranged for them. A pleasant screen, and one that admits of good treatment, may be formed of alternate turned and square strips of wood, with turned filling-in pieces between forming a series of small square openings. These can be inserted during the summer months, and are used in most of the cities of eastern Europe instead of sashes. They give air, and, if formed of hard wood, partial protection to the room. The wood being thick, they cannot be seen through unless the observer is directly opposite and on the same level.

§ 111. **Wood finish.** In the interior of a country house, it will generally be found cheaper to trim the rooms with the white and red pine, well seasoned and free from sap (i. e. dark bluish stains) not on account of actual cost of hard wood but of the fancy price that is generally associated with it in the minds of builders. These are the most reliable woods we have in the market; standing changes of moisture and temperature better than any of the others. They however should seldom be painted and *never white*; painting destroys the beauty of the grain, which can be well brought out with shellac and copal varnish, or it may be slighty stained and varnished. If not varnished, it soils very easily and it is difficult to clean. External work should be painted and never be varnished, as varnish will not stand a season exposed.

§ 112. In the general design of mouldings, care should always be taken to adapt them to

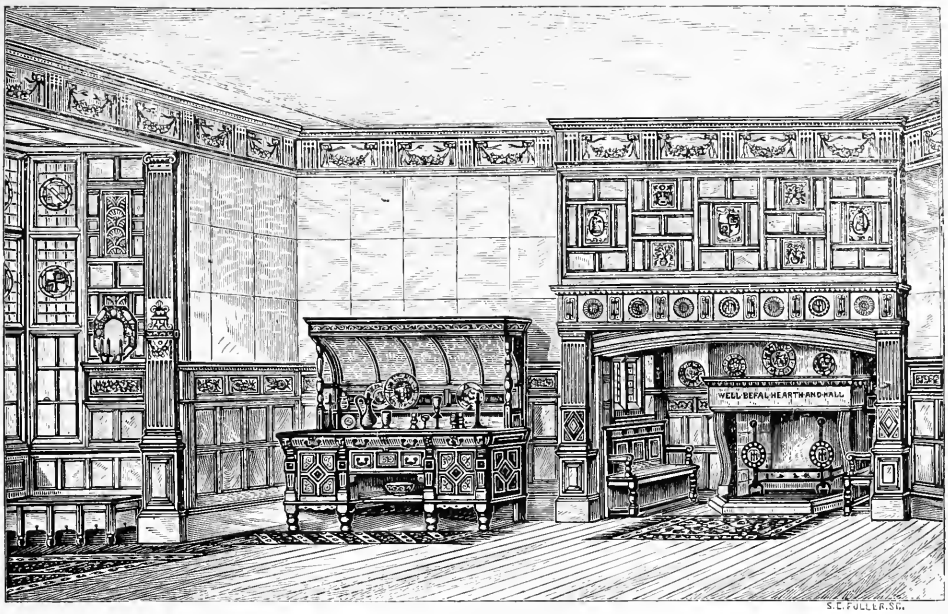


Fig. 61.
An English Dining-Room.

the nature of the wood so as to bring out its color and beauties of grain and this will usually be accomplished by keeping them small and flat, and grouping them so as to allow a plain surface for better display of the wood. All mouldings should have continuity and either lie against or be received on wood. In general, avoid shewing the end sections of mouldings as it will appear cheap if not carefully done. Do not make the trimming thin, as it is apt to look weak and wiry. Veneers of precious woods should be used sparingly and as a background for the general trim, in the same manner that you find gold back grounds used in the paintings by the old masters. Never use them as a ground for carving in relief or it will appear stuck on and lonely.

§113. Most of the hard wood in the market, owing to rapid growth and consequent open grain, is very apt to twist and be difficult to keep in place; hence, all mouldings should be formed of small separate members, of even grain, with a softer wood introduced to relieve it. If this is not properly attended to, the finish of rooms is apt to be a source of trouble and annoyance from the shrinking, swelling, splitting or chipping of the wood, no matter how much care has been taken in the seasoning and drying.

§114. The best seasoning that timber which is to be used for joining can have, is to be well water-soaked and then sun-dried, the timber standing with its grain vertical; and it is well not to rely on kiln-dried timber, in which the sap is only dried up, and will surely swell and cause a great deal of trouble as soon as the work is affected by the change of climate.

§115. Inlays are always appropriate and can be readily done mechanically by any country carpenter with a fret saw. The design should be well massed and on thin paper which can be pasted on a series of veneers of alternate colored wood each with paper pasted on to stiffen it. The design is sawn out and the pieces counter changed and applied to panels or where it is desired.

§116. In hard wood there is a great diversity of colors, quality of grain and strength, and it is advisable at the outset to form some plan by which a variety may be introduced into the living rooms without creating too sudden a contrast. The following has been found desirable. The vestibule and entrance doors of oak relieved with wall panels of majolica tiles and tiled floor. The hall staircase and gentleman's room of black walnut carried to ceiling forming, plaster panels for decoration, with floor of cherry and black walnut. The library of oak and black walnut in equal proportions, with floor of maple and black walnut. The drawing room of oak and root of ash, with black walnut sparingly used and ebony columns, narrow pine floor for carpet. The dining room and its floor of oak with stone fireplace for wood fire.

§117. **Fixed furniture.** It is very desirable to cover as much as possible of the wall space and introduce in the general design of room as much of the fixed furniture as possible, so as to leave little for the decorator and upholsterer to mar by incongruous details. The following particulars may sometimes be left to the architect with more confidence than to the average furniture maker. In the vestibule, a seat, and provision for the doors etc., can be arranged

and the ceiling should be of wood, the frost having great effect on hard finished plaster. In the hall, provision should be made for wrap chest, hats and coats, umbrellas and seats, not forgetting the fireplace and a place for the big clock. (See Figs. 36 and 37). In the gentleman's room, the necessary provision for adjusting the toilet. The butler's pantry should be provided with a hot plate, "a register or steam coil under a slate or marble slab," and in large houses should have the butler's bedroom with plate safe near at hand. The dining-room may properly have a high wainscot with buffet arranged for plate and wine coolers designed to form a part of it, the upper portion of wall panelled with a frieze of wood designed to receive tapestry or hanging. A large open fireplace may also form a striking feature in this room as well as in the hall. Proper provision should be made in the woodwork of all rooms for gas brackets, etc. In the library, bookcases with provision for handling every day books, books of reference, desk, print drawers and pamphlet closets. The space over and out of reach may be for *objets d'art*, and any convenient wall space for maps, which may be on spring rollers. Let there be an open fireplace. The drawing room has generally to be given to the decorator and upholsterer, although by the proper introduction of such features as wood mantels and chimney glass, arches at bay window and the general arrangement of trimming around windows and doors, the conventional decorator may find some general leading lines defined, should the architect not be employed in this very essential particular.

§ 118. Houses upon which thought has been bestowed in their several details, have been too often marred by the fashions of the moment introduced in the decoration and furniture, by panderers to the prevailing taste. One of the outgrowths of this is the misnamed "hard wood finish" in houses built to sell, where the necessary and unavoidable trimmings of doors and windows, together with often one side of a door and the exposed sides of shutters have been executed in a wood costing a few cents a foot more than pine (pine costs 6 cents: black walnut 8 or 9 cents but the latter is a little harder to work,) and in mouldings and applied ornament that do not properly bring out the beauties of the wood.

ADVICE TO PERSONS ABOUT TAKING A HOUSE.

§ 119. Before taking a house, it is always well to get the best professional advice obtainable regarding its condition and value. Especially is this the case where the house is a new one, as such are so often built only to sell, and the bad construction and materials are hidden under a mask of fresh paint and meretricious ornament, the newness of which soon wears off, exposing its shams and entailing frequent expense and disturbance.

§ 120. Houses that have been occupied for a season, if built with poor unseasoned material and bad workmanship, tell their own story from the shrinking of floor boards, improper closing of doors, windows, etc., separation of door and window-frames from plaster, sagging or sinking of floors and separation of surbase, cracked plaster on walls and ceilings, and general bad ironmongery, together with the offensive odors escaping from the bad plumbing.

§ 121. All these points are readily seen by an ordinary observer, but the hidden difficulties, such as insufficient depth and number of floor beams, the want of constructional timber, and faults in the general method of building require a practiced eye to detect them, and for this reason a written report from an architect thoroughly describing the condition of the house may cause a reduction in the price, should the would-be purchaser, for especial reasons, still entertain the thought of buying.

Unhealthiness of New Houses.—The coincidence of moving into a new house and soon having a doctor's bill to pay has frequently been a subject of remark; the cause often is that the house is moved into before the walls are dried. It has been estimated that 30,000 gallons of water are consumed in raising a medium-sized three-story brick-house; and this can only be gotten rid of by slow evaporation. A house should never be occupied in less than three months after the plaster is on and after fires have been going steadily for a week, with ample ventilation by doors and windows. No water for drinking or cooking should be used from new lead pipes, for at least one month after the water has been otherwise used daily. Even when pipes have been long in use water that has been standing had better be run off before any is used for drinking or cooking. *See* BRICK; CHIMNEY; DRAIN; EARTH-CLOSET; FIRE-PLACE; FLUE; GUTTER; LIGHTNING-ROD; SEWER; VENTILATION; and WARMING.

HUCKABACK—A coarse linen fabric ornamented with raised figures, and much used for towels, etc. It has little beauty, but answers very well for common household wear.

HUCKLEBERRY.—The best variety is called the *swamp huckleberry or blueberry;* it is large, purplish-black, subacid, rich and juicy. The *common* or *high-bush* huckleberry is also fine. The common low-bush huckleberries are called "cracker-berries" by Jersey pickers because when eaten they crack in the mouth, on account of their tough skin. They are smooth, quite black, full of seeds, and acid. A better variety of the *low-bush* is the *sugar-berry;* it is sweet, bluish and has very small seeds.

HUNGARIAN WINE.—Hungary's relative facilities for wine-growing far exceed those of any country in Europe. On an area of 125,000 square miles, Hungary annually produces (on an average) 500 millions of gallons, whereas France, on an area of 204,000, reaches about 700 millions of gallons.

These wines are grown under so many vastly different conditions of soil, latitude, altitude

and attendance that the result is a variety of brands, unattainable by either France, Spain, Italy or Greece. A distinct feature of the wines of Hungary is their *positiveness*, their body, bouquet and aftertaste, impossible to produce artificially. Of the several hundred distinct brands, we give a general classification and a short description of those commercially most important.

Hungarians rarely mix their wine with water, but rather drink wine and water alternately from two glasses.

I. RED WINE :

1. **Baltazeker.**—A healthy table wine of medium strength, (for a *Hungarian* wine) fine taste and bouquet.

2. **Budai,** — (grown round *Buda*). The Adelsberger or Budai-cream is warming (as most Hungarian wines are) vigorous, slightly astringent, with a deep, aromatic, extremely grateful after-taste. Indisputably a tonic.

3. **Egri.** — (German Erlauer) a fiery, generous *very astringent* wine, often recommended in gastric disorders; the highest quality is so vigorous, that its effect reaches the pores in less than two hours; also a tonic. Of this wine, there is also an "aszu," for explanation of which term, see under TOKAY below.

4. **Karlovai.**—(Carlowitzer) grown in that portion of Slavonia, between the Save and Drave rivers, which the Romans called Syrmium on hills that were first planted with vines by the soldiers of Aurelius Probus. Rich, generous, warming and aromatic to a degree. The finest grapes are selected and left on the vines or when culled, exposed to the sun until they wrinkle, then hung over tubs until the juice bursts the skin of the grape and this juice, obtained thus without pressing, is collected and boiled with wormwood (*absinthe*) and is sold as "Carlowitzer Tropfwermutho"—a nectar that Bulwer praises in one of his novels.

5. **Matrai.**—A heavy, rich wine, grown in Northern Hungary round the Matra hills, very much like good Port or Cyprus wine.

6. **Szegszardi,** grown in the triangle formed by the confluence of the rivers Danube and Drave, on land abounding in iron ore. It has a slightly mineral taste, and is recommended as a tonic all over the country, agreeable in flavor and of moderate strength.

7. **Tetenyi** (Tettinger) grown near Buda, partaking of the qualities of Budai, (which see.)

8. **Villanyi,** not as hot as some other red wines of Hungary, of a most refined, insidious taste, quite apt to ensnare the unwary.

9. **Visontai,** just astringent enough to make it a *piquant*, delightful beverage, strong and warming, and a first class tonic. A white wine is raised in the same locality, which is made of Muscat-grapes; this brand is very high-flavored and seems to be liquid fragrance: It is sold under the name of "Visontai Muscatel."

II. WHITE WINE :

1. **Magyarati,** a very healthy and agreeable brand, much like St. György.

2. **Menesi.**—A brand of amber-color, neither red, nor white, grown near the boundary of Transylvania, on a stratum of aluminium, which imparts to it a delicious tartness; the Menesi Aszu is a delicious sweet wine with just enough tartness to make it piquant. It is very heady.

3. **Neszmelyi.**—(Germ. Nessmüller) is a lighter brand than any mentioned here, of remarkably fine bouquet and taste. It is grown just South of the Danube between Gran and Comorn.

4. **Ruszti,** grown about seven English miles north of Soprony; (Oedenburg) dry Ruszti is one of the noblest brands of white wine. Some think it superior to the finest Burgundy, red or white. These grapes are also made into Aszu, of a dark amber-color.

5. **St. Gyorgy** (St. George) grown near the boundary of Austria, about 13 English miles from the battle-field of Wagram, is a beautiful white table-wine of moderate strength; there is also Aszu made of this wine.

6. **Somlai** (Schomlauer) is a superior white wine, full of fire, bouquet and body.

7. **Sopronyi** (Germ: Oedenburger) grown near the boundary of Austria, 40 English miles S. E. of Vienna near the left shore of the lake of Neusiedel; a delicate dry wine, hot, rich and with an aftertaste, such as grapes, or pears will leave on the palate, and so intense, that it lasts until some other drink or food dispels it. From select grapes of the Muscat vine planted in this vicinity, the Sopronyi Muscatel Aszu (see TOKAY) is made, which is quite sweet, with just the least touch of fruity acidity and a delightful bouquet.

8. **Szamarodner.**—In nearly every feature a relative to the Tokay; valued as a dessert-wine.

9. **Tokay.**—Of all dry wines the richest and noblest. Grown near the Tibisc river on the left bank, rather North. The finest grapes are left to become wrinkled, and a bucket or more are then pressed with the common grapes, thus making the "aszu," which is of surpassingly pleasant taste, rather sweet, generous, very strong and soporific, an excellent tonic for those convalescing from typhoid fever and kindred diseases. As an indication of the body of this "*king of wines*," it may be stated that the *first dose* is a *teaspoonful*. According to the number of buckets of select grapes used, the "Aszu" is called *einbuttig*, *zweibuttig*, *dreibuttig* or *vierbuttig*, the last kind being the highest. When these grapes are hung over tubs, until the juice bursts the skin (as in *Karlovai* above) the result is the celebrated "Essenz Tokay" or essence of Tokay.

HUNGARY-WATER.—To one pint of proof spirits of wine put one ounce of oil of rosemary, and two drachms of essence of ambergris; shake the bottle well several times, then let the cork remain out twenty-four hours, after which stop it up tight. After a month, during which time it should be shaken daily, put the water into small bottles.

HYACINTHE.—This is the most popular of all the garden-bulbs, and richly repays culti-

vation either in or out of doors. All new varieties are raised from seed, but much care and patience are required, and often not more than six fine flowers will be found in a thousand seedlings; so it is best to raise them from the bulbs, which can be obtained in countless varieties at the florist's. In the selection of bulbs, choose those that are hard, and solid, and sound at the base. Size is no criterion, some of the finest kinds being always large, and others always small, nor can any rule be given as to the shape, some being quite conical at all times, and others always spherical or flat. As a general rule, choose medium-sized, hard, heavy bulbs; and avoid those which have the appearance of throwing out many offsets. All hyacinths multiply rapidly by offsets; and these offsets should be planted by themselves in a dry, sunny location. If they attempt to flower the first spring, pick off the buds, for the root needs all its strength; but the next spring they will flower well, and after that they can be treated like grown-up bulbs.

In planting hyacinths, select a warm, sunny spot in the garden, where the drainage is good; trench this about eighteen inches deep, digging in a liberal quantity of well-rotted cow manure, and enough pure sand to make the soil rather loose. This being done, about the first of October plant the bulbs in lines or circles, as may suit the fancy. The usual mistake in planting bulbs is not setting them deep enough; they are often thrown out by the frost. Hyacinths should be planted at least four inches deep. A good covering of coarse manure and straw should be laid over the bed about the first of December, or just before the ground freezes up. In the spring, about the first of April, rake off the straw. The bulbs will be found already up; the blanched stalks will soon turn green, and an abundance of bloom will follow. After the leaves have died down, if you have fine varieties, it is best to take them up and keep them in a dry place until the season for planting comes again. The general practice, however, is to allow the bulbs to remain in the ground, where, if undisturbed, they will bloom year after year.

In growing the hyacinthe for winter bloom in the house, a succession may be maintained by planting a few bulbs every week from November until Christmas. Those first planted will bloom soon after New Year's, and a continuous bloom may be had until the flowers bloom in April in the open air. They should be planted in deep pots filled with a compost made of one half coarse sand, one fourth rich yellow loam, and one fourth well-rotted cow-manure. Set the bulbs in this, leaving the crown about half an inch above the surface of the soil; press the earth around the bulb, and settle all by a good watering. Then set the pots away in a warm, dark place, keeping the soil moderately damp until the pot is filled with roots, which may be ascertained by carefully turning out the contents. Then bring them to the light. The shoot will probably be an inch high and pure white, but in a few days it will become green, and grow with great rapidity, the full bloom appearing in a few weeks. Water liberally after the bulbs are brought to the light. If a few drops of hartshorn are added to the water it will assist a full development of foliage and flowers; bone shavings or horn scrapings will have the same effect, and small bits of powdered charcoal mixed with the earth will impart great depth and brilliancy of color to the flowers and a rich green to the foliage. Hyacinths may also be grown in pure silver sand, in moss, or even in clear rain-water. Of the numberless varieties of the hyacinthe the following are among the best: *Double Blue:* Argus, Bonaparte, Envoye, Grand Vedette, La Majesteuse, Laurens Koster, Lord Wellington, and Orondatus. *Single Blue:* Amicus, Argus, Baron Von Tuyll, Emilius, L'amie du Cœur, Prince Albert, Orondatus, and Robert Peel. *Double Red:* Acteur, Bouquet Tendre, Grootverst, Hecla, Josephine, Panorama, Rex Rubrorum, and Sans Souci. *Single Red:* Amy, Charles Dickens, Mrs. Beecher Stowe, and Porcelain Sceptre. *Double White:* A là Mode, Anna Maria, Gloria Florum, Grand Monarque, Miss Kitty, Sultan Achmet, Triomphe Blandina, and Violette Superbe. *Single White:* Anna Paulovna, Blandine, Elfrida, General Cavaignac, Mont Blanc, Paix de l'Europe, Victoria Regina, and Voltaire. *Double Yellow:* Bouquet d'Orange, Crœsus, Duc de Berry d'Or, Goethe, Heroine, Louis d'Or, and Ophir. *Single Yellow:* Alida, Jacoba, Aurora, Fleur d'Or, Heroine, Lion d'Or, Prince of Orange, Soliel d'Or, and Victor Hugo.

HYDRANGEA.—A genus of shrubby plant, so called from their predilection for water and from the calyx of some species resembling a cup. One variety of the hydrangea grows wild throughout Georgia and the Carolinas, and others from Pennsylvania to Virginia; but the *H. Hortensius* (with pink flowers) is the variety usually cultivated. This is not hardy, and consequently must be grown in tubs and wintered in the cellar. The soil should consist of one part loam, one part manure, and one part peat. One requisite for its successful culture is shade; if grown in the sun, the leaves become burned and the plant does poorly. While growing, the plants must have a liberal supply of water, and will wither at once if it is withheld. The flowers are produced on the shoots of the previous year. To flower profusely, it requires to be well grown, and the leaves on young plants are larger than those on plants three or four years old. Cuttings of the wood or of the growing stems will root without difficulty; those of the latter make roots soonest, and if they are then potted in rich soil they will grow very rapidly. Besides the *Hortensius*, the *H. Japonica*, with blue and white flowers, is desirable.

HYDROPATHY.—A system of treatment of disease mainly or exclusively by the application of water. Many of the advantages claimed for the system by its advocates are purely imaginary, but there can be no doubt that it is of

the greatest benefit in a large number of cases. It gives a healthy stimulus to the nerves, bracing them, and acting like a tonic and soother to the whole system. It is likewise invaluable in cases where the circulation of the blood is impaired; and it is nearly always beneficial in cases of indigestion, nervousness, an impaired constitution, a too full habit, or where the patient has been living too freely without taking much exercise. Having, under the head of BATH, already noticed at length the different forms of baths, and the great importance of bathing, it only remains here to mention briefly some of the forms in which it is employed as a remedial agent. These are various. Besides the ordinary bath and the shower bath, one of the most common is the *douche bath*, in which a single jet of water, varying in size from that of a quill pen to the thickness of a man's arm, is projected with great force, either from above, below, or on one side, upon a particular part of the body. The *sitz bath* is taken sitting. Besides these there are the foot bath, hand bath, etc. Sometimes when the patient is sitting in a warm or tepid bath, cold water is poured over the head and upper part of the person. Pieces of coarse linen, saturated with cold water, are also applied to the skin, and covered over with dry cloths, and usually remoistened several times a day. The *wet-sheet packing* is one of the characteristic features of the system; it consists in enveloping the patient in a sheet wrung out in cold water, and then covering him over with dry blankets. The system of dietary and exercise that are kept up at the water-cure establishments is probably even more conducive to health than the baths themselves.

HYDROPHOBIA.—This appalling disease is caused by the bite of some rabid animal, usually a dog or a wolf, though instances of its communication by a cat or a horse have occurred. It would be useless to dwell on the symptoms of the disease, because when once it is developed there is no known cure; by the use of chloroform and narcotics we may mitigate the agony of the patient, but that is all. The great thing is to remove the poison before it has extended itself into the system. This is best done by excision of the wounded part, care being taken that every portion of it is removed. When it is impossible to use the knife effectually, a powerful caustic (nitric acid, or strong liquid ammonia) should be applied freely over the whole surface of the wound, so as to destroy the effects of the poison. As the poison is not very active, these means are usually effective even when employed some time after the receipt of the wound; but of course all due haste should be made, and it is well to keep washing the wound with tepid water until medical aid arrives.

It is now conceded by all medical authorities that many cases of so-called hydrophobia are purely hysterical, being caused by the operation of dread on a sensitive organization; so it is important to know that not more than one case in thirty of bites by mad dogs results in hydrophobia, even when the dog was unmistakably rabid.

Hydrophobia in the Dog.—The symptoms are usually as follows:—The first, according to Youatt, is a marked change of temper; the naturally cheerful dog becoming waspish and morose, and the bold fondling pet retreating from his master's hand as if it were that of a stranger. On the other hand, the shy dog becomes bold; but in almost every case there is a total change of manner for several days before the absolute outbreak of the attack, which is indicated by a kind of delirious watching of imaginary objects, the dog snapping at the wall, or, if anything comes in his way, tearing it to pieces with savage fury. With this there is constant watchfulness, and sometimes a peculiarly hollow howl, while at others no sound whatever is given, the case being then described as "dumb madness." Fever is always present, but it is difficult to ascertain its extent, on account of the danger of approaching the patient; and with this (in contradiction to the name hydrophobia) there is invariably an urgent thirst, which the dog is in such a hurry to gratify that he generally upsets the vessel containing the water. There is also an increased secretion of saliva, which becomes thick, viscid, adhesive, and glutinous, and clings to the corners of the mouth, whence the dog makes furious attempts to detach it. This is an early symptom in the dog, and can scarcely be mistaken; as soon as it appears he should be shot, before the rabid stage is reached. It is now a thoroughly established fact that hydrophobia has no relation to the weather; that, in fact, more cases occur in winter than in summer.

Dr. John C. Dalton, of the New York Board of Health, furnishes the following practical rules which should be carefully attended to:—

1. A dog that is sick from any cause should be watched and treated carefully until his recovery.

2. A dog that is sick and restless is an object of suspicion. This is the earliest peculiar symptom of hydrophobia.

3. A dog that is sick and restless and has a depraved appetite, gnawing and swallowing bits of cloth, wood, coal, brick, mortar, or his own dung, is a dangerous animal. He should be at once chained up and kept in confinement until his condition be clearly ascertained.

4. If, in addition to any or all of the foregoing symptoms, the dog has delusion of the senses, appearing to see or hear imaginary sights or sounds, trying to pass through a closed door, catching at flies in the air where there are none, or searching for something which does not exist, there is great probability that he is, or is becoming, hydrophobic. He should be secured and confined without delay.

5. In case any one is bitten by a dog whose condition is suspicious, the most effective and beneficial treatment is to cauterize the wound

at once with a stick of silver nitrate, commonly called "lunar caustic." The stick of caustic should be sharpened to a pencil point, introduced quite to the bottom of the wound, and held in contact with every part of the wounded surface until it is thoroughly cauterized and insensible. This destroys the virus by which the disease would be communicated.

HYGIENE. (*See* HEALTH.)

HYPOCHONDRIA.—A disease characterized by extreme sensibility of the nervous system, and bordering very closely on insanity, to which it sometimes leads. The patient's ideas are often of the most extravagant character, and he generally believes himself to be suffering from some terrible and imaginary disease, or to be much worse than he really is. He may fancy that he is immensely tall or inordinately small; that he is heavy as lead or light as a feather; that he is composed of glass or a lump of butter. Hypochondriacs are all extremely timid, and their fears are exercised upon trifles, or are altogether groundless. They dwell constantly upon their own sufferings, and are usually morose, peevish, suspicious, and frequently believe their dearest friends to have designs upon their life. If not arrested, the disease becomes organic, and in many cases developes into acute insanity with suicidal mania. The causes of hypochondria are various, arising usually from an impaired condition of the nervous system, and especially from derangement of the digestive functions. Men of letters, overtasked students, and men of business, and those whose naturally delicate constitutions and ardent imaginative minds have been abnormally stimulated, are the most frequent subjects of hypochondria; but it may arise in the strongest persons, after profound grief or other moral emotion, debilitating excesses of any kind, or the sudden suppression of any habitual discharge. Those, too, who, from want of occupation and a due amount of exercise, acquire a luxurious habit, often fall a prey to it.

Treatment.—The treatment must of course vary somewhat according to the origin and nature of the disease. In general, the important thing is to withdraw the patient's mind as much as possible from himself; and for this purpose change of scene and cheerful society should be sought. The system should also be strengthened by tonics, and exercise in the open air. If the disease arise from idleness and luxury, then plenty of active exercise and a spare diet are the proper mode of treatment. In all cases the state of the digestive organs should be attended to, and the bowels kept in a strictly normal condition.

HYSTERICAL FITS.—An hysterical fit, though generally a very innocent thing in its effects, is yet sufficiently alarming when seen for the first time. Though most common in women of an excitable and ill-regulated mind, it may occur in the most sensible and calm-judging persons under sudden shocks, fright, great mental emotions, grief, joy, or anger. The fit is often preceded by a feeling of faintness and of choking, as if a ball were rising in the throat, interfering with swallowing, and even with speech. Then comes on a violent fit of screaming and sobbing, mingled with bursts of laughter; the eyes are closed, the breath is drawn with difficulty, the face becomes red, and the limbs, perhaps, convulsed; the throat is grasped violently, or the hair is torn, or the hands or feet are beaten violently against the ground. In fifteen or twenty minutes the fit goes off, and the patient comes to herself, having been more or less unconscious while it lasted. When a paroxysm threatens, loosen each article of dress, lay the patient on the floor without a carpet, and dash large quantities of cold water into the face, to the extent of two or three pailfuls if need be. A little water merely sprinkled into the face only increases the disorder, while large quantities, strongly dashed, cut it short. No harm results, however, if no treatment is employed. A dose of valerian is a popular and excellent remedy.

Hysteria, of which the fits are merely a transient paroxysm, is, as its name implies, very frequently symptomatic of some irregularity in the function peculiar to the womb, the periodical secretion from that organ being either deficient or in excess, irregular in its recurrence, attended with difficulty and pain, or, as in many cases, morbid in its quality. To some of these conditions the severe, protracted or repeated attacks of hysteria are generally to be ascribed; but it may also be caused by nervous irritability, vivid moral emotions, anything which excites the imagination, especially disappointed love, jealousy, and various excesses of body and mind. In very many cases it is partly a desire of the mind, brought on by improper self-abandonment to the power of the emotions, and especially to feelings of a painful character or of sexual tendency.

Treatment.—The principles of treating hysteria are threefold: 1, to improve the nutrition of the nervous system by bringing the blood up to its healthy standard, by a strengthening diet, hygienic means, and the judicious employment of tonics; 2, to remove all irregularities in the menstrual or other functions, when they are evident exciting causes; 3, to act upon the mind, by leading the patient to repress the first emotional excitement by the force of will, and to direct the attention to a different class of objects, substituting a pleasant for a disagreeable train of thought. After a paroxysm, tranquility of mind and habits of self-control are the best means of preventing a return; any disappointment, whether in love, business, or other affairs of life, should, if possible, be removed by the realization of the hopes. If marriage be unattainable, the tendency to hysterical attacks will often be removed by the change of air and scene and habits resulting from a distant journey; and a similar course is useful to distract the attention from other consuming cares and persons which may act as predisposing causes.

I

ICE.—Ice is usually kept for immediate family use, in refrigerators, which it is cheapest to buy good. They should be seldom opened. Two thicknesses of newspaper wrapped around the ice before it is put into the receptacle will make it last nearly twice as long. Where a refrigerator is not at hand, ice should be wrapped in a thick blanket and kept in a cool place. (*See* COOLERS.)

ICE BAG.—A rubber bag, closed with a metal clamp, to be obtained from druggists and rubber stores. It is of the greatest convenience where bruises, or any other ill, call for the application of ice to the surface of the body.

ICE-HOUSES.—Whether dug out of the side of a hill or in level ground, require protection from heat transmitted or conducted through the atmosphere or through the soil. To protect them from the heat of the sun they should always be dug in places well sheltered by trees; to protect them from heated winds the opening into them should be towards the north. In all cases their entrances should be closed hermetically, and at all times when the temperature is above freezing-point. An ice-house should never be dug in wet soil, or near a spring; and to prevent the transmission of heat through the earth, the sides, bottom, and top should be lined with masonry and cement, thick and close enough to prevent the entrance of water. A small-sized ice-house, cheap and simple, may be made as follows: Dig a hole in the north side of a hill, about six and a half feet in diameter and in depth. At the bottom run a small trench through to the outside, for carrying off the water produced by the melting of the ice, the bottom and sides must be made of laths or thin planks attached to girders and uprights; over this planking must be placed straw, pressed close, and forming a layer of non-conducting material about half an inch thick. The top of the pit should be covered with a ceiling of wood, and over this earth should be heaped to a height of over three feet. At the north side of the pit is the entrance, a square-head forming an inclosure, which should be filled with straw. A few steps conduct down to the door of the ice-house, which must be closely covered with bundles of straw, and is itself made of wood with straw attached to its inner side. An ice-house of this size will hold between three and four tons of ice; enough, allowing for all probable waste by melting, to last the largest household through the season. It should be entered only once a day; and the straw which covers the entrance should not be removed for a longer time, or more, than is necessary.

It is necessary to *trap* the drain by which the water that melts from the ice is carried away. If this be not done, and with a trap of such a nature as to be certain to remain full of water, the drain will act as an inlet of warm air, and will effectually counteract all the best precautions of other sorts.

ICE-CREAM.—If ice-cream is to be made at home, it is best (and most economical) to buy a patent "freezer" and have it always ready. There are a great number of these to be had, nearly all of which are good; select one which

Ice-pail and Freezer.

is simple in construction, and which has a space of about five inches between the outer surface of the "form" and the inner surface of the "tub." This, if properly managed, will freeze cream in half an hour. In preparing for use, break the ice up in small pieces and put a layer in the tub about three inches deep; then put in a layer of salt (rock salt is best), and then more ice, etc., using about one-fourth as much salt as ice and having a layer of ice on top. This mixture must come at least as high up on the outside of the freezer as the cream does on the inside, and it is better to have it reach the whole height of the freezer. A hole in the tub to let off the water as the ice melts is a great advantage. In taking out for use, first wipe off every particle of the ice and salt from the freezer, then with a knife loosen the sides, then invert the freezer upon the dish in which the ice is to be served, and apply two towels wrung out in hot water to the bottom part; the whole will soon slide out in the shape of a cylinder. If it is desired to serve the cream in moulds, pour it into them when it is frozen sufficiently, and then cover the moulds with snow and salt till they are wanted. Dip the moulds in warm water to make the ice slip out easily.

Almond Ice-cream.—Sweet almonds, 3 oz; bitter almonds, 1 oz; cream, 3 pts; sugar, 2 teacupfuls; arrow-root, 1 tablespoonful wet up with cold milk; rose-water, 2 tablespoonfuls.

Pound the almonds to a paste, and add to them the rose-water; heat one pint of the cream almost to boiling; stir in the sugar, and when this is melted, the almonds; simmer ten minutes, stirring often; then remove from the fire and let it stand ten minutes longer in a cover-

ed vessel. Strain the cream pressing the bag hard; then return it to the sauce-pan and stir in the arrowroot until the cream thickens—say five minutes. When quite cold, beat very light with an egg-whip, adding gradually the rest of the cream; it should be light in half an hour. Then freeze.

Chocolate Ice-cream.—*Take:*–Chocolate, 3 dessert-spoonfuls; cream, 1 pt; milk, ½ pt; sugar, 1 teacupful; egg, 1.

Beat the egg very light and mix it with the sugar; heat the milk almost to boiling and add it to the egg and sugar; rub the chocolate smooth in a little milk, and stir it in. A little vanilla may be added if the flavor is liked. Put on the fire and heat until it thickens well, stirring all the time; then set aside to cool. When it is cold, beat in the cream, and freeze.

Coffee Ice-cream.—*Take:*—Coffee, 1 cupful, strong and clear; cream, 3 pts; sugar, 3 cupfuls; arrowroot, 2 table-spoonfuls.

Take half the cream, heat it nearly to boiling and stir in the sugar; when this is melted, add the coffee; wet up the arrowroot with a little cold milk, and stir that in. Boil for five minutes, stirring constantly, and set aside to cool. When cold, beat in the rest of the cream by degrees; then freeze.

Fruit Ice-cream.—Make rich boiled custard, and mash into it the soft ripe fruit, or the grated or cooked hard fruit, or grated pineapple; rub all through a sieve, sweeten it very sweet, and freeze it. Apples, pears, peaches, quinces, raspberries, and strawberries, are all good for this purpose.

Lemon Ice-cream.—*Take:*—Lemons, 1 doz; cream, 3 qts; sugar.

Squeeze all the juice from the lemons, and stir into it enough of sugar to make it thick; then add gradually the cream, flavored with some of the grated rind, and freeze.

Orange Ice-Cream.—Made same as lemon ice-cream. Orange requires less sugar.

Orgeat Ice-Cream.—*Take:*–Sweet almonds, 1 oz; bitter almonds, ¼ oz; cream, 1 pt; eggs, yolks of 8; sifted sugar, 4 oz.

Blanch and pound the almonds with a little orange-flower water (or rose-water); beat the yolks of the eggs, add the sugar, and stir all gently into the cream; put the whole on the fire and stir continually till it begins to thicken. Take it off, stir till cold, and then put it into the freezer.

Philadelphia Ice-cream.—*Take:*–Cream or milk, 2 qts; sugar, powdered, 1 lb; arrowroot, 3 table-spoonfuls; eggs, whites of 8.

Boil the milk or cream (the latter is best); thicken it with the arrowroot; add the sugar; and pour the whole upon the whites of the eggs, which should previously have been well beaten up. If a flavor of vanilla is desired, split half a bean, and boil it in the milk. When all the ingredients are stirred together thoroughly, freeze.

Pineapple Ice-cream.—*Take:*–Pineapple, 1 large one; cream, 1 qt; powdered sugar, 1 lb.

Pare the pineapple, slice it thin, and spread the sugar between the slices; cover it, and let it stand three hours; then chop it up fine, and strain the syrup through a sieve; beat this into the cream, and freeze at once. A few slices of the pineapple may be cut into bits, unsugared, and stirred into the cream when it is half frozen.

Peach Ice-cream.—Make same as pineapple ice-cream.

Strawberry or raspberry Ice-cream.—*Take:*–Strawberries or raspberries, 1 pt; cream, 1 pt; sugar; juice of half a lemon.

Mash the berries and strain off the juice; to this add sugar enough to make very sweet, and stir in the cream; strain in the juice of half a lemon; press the whole through a sieve, and freeze. *Currants* may be worked up in the same way.

If raspberries or strawberries are not in season, take a pound of the juice of either and add the juice of one or two lemons, half a pint of cream, and half a pint of fresh milk; color with a few drops of tincture of cochineal, and freeze.

Vanilla Ice-cream.—Make same as Philadelphia ice-cream, first boiling a vanilla bean in the milk till the flavor is strong enough. Or, boil a vanilla bean, well scraped, in a quart of milk, until flavored; beat up the yolks of eight eggs and stir them in; sweeten well; and add the whites of the eggs, whipped to a stiff froth. Boil till it begins to thicken, stir till cold, and then freeze.

ICES (WATER).—Omit the cream, and mix water with the juices of the fruit. When frozen they should be perfectly smooth, and soft enough to yield easily to the spoon. If brittle or solid, it is an indication that too much water has been used.

Cherry-water Ice.—*Take:*–Cherries, 1 qt; lemons, 2; sugar, 1 pt; water, 1 pt; brandy, 1 wineglassful.

Bruise the cherries and half the stones in a mortar; squeeze them through a bag over the sugar; add the water and the brandy; then freeze.

Currant-water Ice.—*Take:*–Ripe, red currants, and granulated sugar; eggs, whites of 2.

Squeeze the currants through a linen bag, and for each pint of the juice allow a pound of granulated sugar and a pint of water; and when the sugar is thoroughly melted, put into the freezer; when half frozen, add the whites of two eggs, whipped to a stiff froth.

Gooseberry-water Ice.—Stew the gooseberries until they are soft, and then squeeze out the juice through a linen bag; to every pint allow a pound of granulated sugar and a pint of water; mix well, and freeze; eggs as above.

Lemon-water Ice.—To one pint of lemon juice, add one quart of granulated sugar and one quart of water, in which the grated rind of three lemons has been soaked, until highly flavored; when partly frozen, add the whites of four eggs, beaten to a stiff froth.

Orange-water Ice.—*Take:*–Oranges, 6; lemons, 2; sugar, 1 pt; water, 1 pt; eggs, whites of 2.

Prepare and freeze as directed for Lemon-water ice.

Pineapple-water Ice.—*Take:*—Pineapples, 2, large and ripe; water 1 pt; egg, white of 1; sugar.

Pare the pineapples, remove the eyes, grate, add the water and sufficient sugar to make it *very* sweet; pass it through the colander and mix it little by little with the white of the egg, beaten to a stiff froth; then freeze.

Raspberry-water Ice.—Make as directed for strawberries.

Strawberry-water Ice.—Crush two quarts of fresh strawberries with two pounds of granulated sugar; let them stand an hour or more; squeeze them in a straining cloth, pressing out all the juice; add to it an equal measure of water, and when half frozen beat in the whites of three eggs, whisked to a stiff froth.

ICING (FOR CAKE).—I. Beat the whites of three eggs to a froth *only* (not until they are *white*); add gradually 1 lb of powdered sugar while you continue beating; this may be done in five minutes. Flavor with lemon or vanilla. Beating the egg stiff before the sugar is added makes the icing slow in drying. Ice the cake as soon as taken from the oven.

II. Place one pound of sugar (*double refined*) in a bowl with a level teaspoonful of cream tartar, and the whites of three eggs; beat with a wooden spoon 20 minutes, when it should be very white and light, and on letting it run from the spoon, preserve its thread-like appearance 3 or 4 minutes. Invert the cake on a mould that is smaller than the cake. Ice the sides with a broad-bladed knife; when dry, turn the cake and cover the top by slowly pouring the icing on the center of the cake.

III. (Almond.)—Blanch fifteen ounces of Jordan, and 1 oz of bitter almonds; pound to a smooth fine paste, with two tablespoonfuls of orange-flower water; then add 1¼ lb sifted sugar, and 4 whites of eggs. Mix and pound well for eight or ten minutes; take it up in a bowl. Pass a long band of paper, 2½ inches wide, around the sides of the cake, leaving it 1 inch above the *top;* then make a layer of the icing, place it in a slow oven 35 minutes without acquiring any color. It may be served as it is, or be iced as above over it.

IMPERIAL.—Scald a jug, and put into it ¼ to ½ oz cream of tartar; add 1 qt of boiling water, flavor with lemon peel or essence of lemon, sweeten to taste. A refreshing and mildly stimulating summer beverage.

INDIA-RUBBER.—A cement can be bought which will mend articles of flexible rubber. The fact that some soft-rubber articles can be stuck together when heated should not lead anybody to heat hard rubber in hopes of repairing it.

The elasticity of soft rubber articles is of rather uncertain duration, manufacturers do not like to guarantee it for more than three months, though it generally lasts much longer. In its pure state caoutchouc is nearly colorless, and the dark blue which most of it has in the crude state is produced by the smoke to which it is subjected in the East Indies in the process of drying.

INDIA SHAWL. (*See* SHAWLS.)

INDIGESTION. (*See* DYSPEPSIA.)

INFANT.—The period of infancy, according to the division usually adopted by medical writers, extends to the time of changing from fluid to solid food, or say the end of the second year; and it is this period only which will be treated of in detail here. For suggestions concerning a later stage of childhood, see article on CHILDREN.*

As the infant's life is for the most part passed in the same room with its mother, it is not necessary to dwell upon the arrangement and care of the nursery. The essential point is that whatever room they pass the time in should be sufficiently ventilated, and should (especially during the first month or two) be kept at a moderate and uniform temperature, say from 65° to 70°. If artificial heat be needed, an open fire is by all means to be preferred to any other method. The best bed for an infant is the ordinary hair mattress; if the infant be delicate, or while it is very young, a folded quilt may be laid on this to make it softer. As a general thing no pillow at all will be needed, but if any is used, it should be a very thin one, made of hair. Blankets of a soft and fleecy texture, and not too heavy, should form the only covering, especially at first. Sheets, when they are used at all, are better of cotton than of linen.

Birth.—Usually a birth takes place in the presence of a physician, and in such cases, the management of all the details is left to him. Sometimes, however, in spite of all precautions, the child is born in his absence, and then the life of both mother and infant depend to some extent upon prompt and intelligent action. The child should be allowed to remain upon the bed, protected from the cold, but with free access of the air to the mouth in order that it may be able to breathe. The attendant should pinch the cord which goes from the child's navel tightly between her thumb and fingers, so as to stop the beating in the arteries of the cord beyond her fingers; she may take hold of the cord for this purpose about six inches from the child's body. If the physician is expected to arrive soon, she should continue thus to hold the cord till he comes. If he cannot be present for some time, she may tie the cord, proceeding in this way: take a strong string (a piece of stout saddler's silk is best) twelve or fifteen inches long, and put it round the cord *two inches from the child's body*, tying it in the usual way of a single knot. Then it should be drawn tight, so as entirely to stop all beating beyond it, care being taken not to let either

*The writer has endeavored to make the suggestions embodied in these two articles full enough for all the practical purposes of an intelligent mother or nurse; but those desiring more detailed information on these and other points should procure the excellent work from which a considerable part of our own material was drawn; "The Handbook for Mothers, by Edward E. Parker, M. D., New York: Hurd & Houghton."

hand slip, for fear the umbilical cord should be torn away from the body of the child, which is a very grave accident. Secure the knot by another tie—that is, make it a hard knot; but the ends must not be cut off yet. Another similar knot must be tied round the cord about two inches farther from the child than the first one; then, with a sharp pair of scissors, the cord may be cut in two. All this should be done in a good light, and especial care taken that nothing is in the way of the scissors so as to be injured by them. After the cord is divided, the cut end next the child should be wiped clear of blood and carefully examined to be sure there is no bleeding from it. If it does bleed, the cord must be again tied a little nearer the child's body than the first string, and with the same precautions as before. The cord however is not to be cut again. When it is ascertained that there is no bleeding from the cord, the ends of the string should be cut off within an inch of the knot, and the child carefully wrapped in a warm and soft blanket or sheet, and kept from all exposure to cold, air to breathe being allowed it. If the child does not breathe when it is first born, its naked chest should be blown upon, with short but vigorous and repeated puffs from the mouth; its chest may be rubbed smartly with the hand or a towel—with alcohol if practicable—or it may be sprinkled smartly with cold water; or a little cold water or alcohol may be taken in the mouth and spurted upon the chest so as to strike it with some force. If these fail, the nurse should put her mouth over the mouth and nose of the child with a view of blowing up its lungs, at the same time that the other means continue to be used. When breathing is fairly established, the child should be allowed to remain without separation of the cord till all the purple color has passed off from the face, and then proceed as before directed.

The care of the child immediately after the birth is a matter of some delicacy. For a time after the cord has been cut, it should be laid in a warm place, carefully protected from currents of air and covered with light clothing to take a little rest. When nothing is more imperative, the infant should then be washed, and for this purpose use a hand-basin of good size, or a very small tub half filled with warm water. To use cold water as is sometimes done is unjustifiable; for although a very robust infant may not suffer from it, the chances are, at the best, that it will take a violent cold. Too hot water is also to be avoided; the proper temperature is a little below blood-heat. The infant may be washed with a soft sponge as it lies on the lap, or it may be placed in the tub: the former is preferable. The difficulty in the first washing is to remove the cheesy matter on the surface. Oil, lard, or egg are frequently applied before the washing under the impression that they remove this cheesy matter more effectually; but for this purpose soap, which should be delicate, not coarse, is sufficient. All of this matter must be carefully removed, especial pains being taken with any creases that may be found, and with the hair. If, in washing the child, any real or supposed deformity is found, it is best to consult the physician at once. If it is not real, it will be a relief to the parents to know it; if it needs attention, it may be important that it receive it at once. After the washing is completed, if the child is cold, it had better be wrapped up snugly in a warm and very soft blanket, and allowed to get warm before the dressing is proceeded with. In dressing, the first thing to be done is to dress the cord of the navel. For this purpose, take a strip of old and soft linen, half an inch wide and six inches long, and wind it round the cord till it is entirely covered; then lay the cord up against the belly, and apply the belly-band over it. This belly-band should be of fine and soft, but strong flannel, about four inches wide and eighteen inches long, and cut *straightways* of the cloth. The middle of the band should be put over the navel, one end lapped over the other, drawn pretty firmly, and fastened so as not to slip; there will be less danger of its slipping if the lower edge is drawn a little tighter than the upper. The rest of the clothing should be warm and very light, and should be put on so as to fit loosely.

After the child is dressed, it should be laid on a soft pillow and allowed to sleep. The fatigue of being born, and then washed and dressed, is such that it will often sleep a long time; which it should be allowed to do without disturbance. If it cries and will not be pacified, it should then be allowed to nurse, or at any rate to take the first lesson in sucking. If the child succeeds in drawing the breast, it will be satisfied, though it gets but very little, and it should then be allowed to go to sleep. In two hours, if it is awake, and cries as if for food, it may be allowed to try the other breast in the same way. It is very desirable that the child should thus get the fluid in the breasts; not only is it natural for it to do this, but this first milk differs from that subsequently produced, in that it has a somewhat *cathartic effect*, and moves from the bowels the secretions deposited in them before birth. It is very important to remember this, for most nurses are bewitched to give the child a teaspoonful of molasses and water, or some other nauseous dose, in order, as they say, to move the bowels. *No medicine of any kind should be permitted to enter the infant's lips.* Even when the mother's breast yields no fluid for several days, no medicine will be needed. Sweetened water, lukewarm, will be all that is required for the first twenty-four hours; afterwards, the addition of one part of boiled and skimmed milk to four or five parts of sugar water is to be given.

The habit of putting the child to the breast every time it cries, should be shunned for the sake of the mother and for the sake of the child itself. Once in two hours is often enough for the new-born child to nurse during the day, and once in three hours during the night. With the increase in the age of the child, the

intervals between meals may be lengthened so that when the child is six months old, it should be about three hours. From birth too, the infant should be accustomed to go to sleep without rocking, walking, or trotting it on the knee; it is astonishing how easily good or bad habits can be developed at this time. Every morning the child should be put into a warm bath (blood-heat is the right temperature), followed by a good rubbing with the soft hand; it should then be dressed and allowed to nurse. After the first month, it is well, if the weather be mild, to accustom the infant to be carried out of doors by its nurse every day. The dress, of course, must be warm, the head and chest being covered and, the feet being protected from the cold. The eyes also must be protected from the light; but the utmost care must be exercised in arranging the veil or handkerchief over the face, for it is the easiest thing imaginable to suffocate a very young child.

Clothing of Infants.—As regards the material of infants' clothing, the same rule applies as to the clothing of adults (*see* CLOTHING). Soft flannel or woollen garments should be worn next to the skin for the greater part of the year, and when a change is made to lighter material, it should be done with great caution. Dress the infant so that it will be always warm, but not so as to cause perspiration. Be sure and keep its feet *always* warm; and to ensure this, warm them at the fire, if they seem cold, and use long dresses. Keep the neck and arms covered; for this purpose wrappers, open in front, and made high in the neck, with long sleeves, to put on over the dress are excellent. It must not be forgotten that the tender frame of the infant yields readily to pressure, and its clothing must be large and loose, so that no part of its form shall be prevented from moving and expanding with all the freedom of nature. Not only will tight dressing at this period cause permanent distortion, and thus destroy grace and beauty, but it will so interfere with the regular course of the blood and action of the various organs as to produce functional derangement, and probably fatal disease. The use of heavy diapers may have a tendency to deform the lower limbs of an infant. If not entirely dispensed with, their use need not be prolonged beyond a very few months of infancy, during which the natural instincts of the child should be made, as they can be at a very early period, to assume the form of regular habits. The diaper, moreover, when used, should be very loosely fitted to the child, so as not to bind the thigh and prevent the free action of its muscles. The substitution of short dresses for long ones may take place when the child is about four months old, if the weather be favorable, and should seldom be deferred beyond the sixth month. As this is quite a serious change in the child's way of life, it should be carefully watched for a time and protected against cold; and, whatever the season, had best wear light woollen socks at first. Tight shoes as well as tight dressing, are a domestic torture against which the infant should be protected. But it is not so much small shoes as ill-made shoes that produce injury to young feet. Shoes that do not fit well are worn down at the heel as soon as the child begins to walk; the ankle seems to give way also, and to bend towards the defective part of the shoe; and the child's step becomes thus both unsafe and awkward. Caps should never be put on an infant's head, except when it is sent into the open air.

Diet of Infants. The mother's milk is the most appropriate food for an infant in all stages of its development; but it happens sometimes, that the mother cannot nurse her infant or that her milk is insufficient, and in such cases it is necessary to find a substitute. This providing of artificial food is the most delicate and important point in the raising of infants; and in the suggestions which we shall offer on the subject we shall follow very closely the rules laid down by Dr. Jacobi in his address to the Public Health Association of New York—presenting his conclusions as far as possible, but omitting the arguments and illustrations by which he explains and enforces them.

Since asses' milk cannot be procured in this country the choice practically lies between the milk of cows and that of goats. In goats' milk the percentage of solid constituents is excessive, and its odor is frequently so disagreeable that infants will refuse to take it. Cow's milk, therefore, is to be preferred to any other. But cow's milk when compared with human milk, is deficient both in sugar and salt; and the former has to be made up by the addition of a little loaf sugar (which is as good as milk-sugar), and the latter by adding an alkaline salt (the carbonate or bicarbonate of potassa or soda). Whichever of these may be selected may not make a great deal of difference under otherwise normal circumstances; but they should be added at once when the milk is put aside for the infant's use. Common salt is also a very necessary addition to cow's milk, especially when the milk is mixed with any vegetable substance. "I add," says Dr. Jacobi, "one to two grains of either of the salts to every meal of the newborn, besides a small quantity of common salt, —and a larger dose in proportion to age." But there is still another difficulty to be overcome before cow's milk can be made a perfectly satisfactory substitute for the mother's milk; and that is the greater coagulability of its caseine which renders it comparatively indigestible. The remedy of this is as follows: Mix quite thin and transparent mucilage (made of gum-arabic) with boiled and skimmed milk, and add the desirable quantity of sugar and salt, or soda. This acts mechanically only, is very soothing to the bowels, and effectually prevents the too rapid coagulation of the milk in the infant's stomach. An indifferent substance of this sort will generally be all that is desired for very young infants; when they advance in weeks and months, they require a substance which, while

subserving the purposes indicated above, will act as a nutriment at the same time. Barley and oatmeal are the best substances for this purpose,—better than wheat, rye, rice, arrow-root, or any other of the cereals. The indications for the use of one or the other lie in the condition of the infant; where there is a decided tendency to constipation, oatmeal should be used; where there is no such tendency, or the bowels are inclined to be loose, barley should be employed. The "prepared barley" is a good preparation; but it is safer to buy the grain and grind it in a common coffee-grinder; then there can be no adulteration. A teaspoonful of either should be boiled in from three to six ounces of water, with some salt, for twelve minutes,—the decoction to be quite thin for very young infants,—thicker for later months—and then strained through a linen cloth. Infants of four or six months are to have equal parts of this decoction (which ought to be made fresh for every meal), and boiled and skimmed milk; and sugar is to be added. At an early age the thin decoction, at a later the milk, ought to prevail in the mixture; until infants are eight or ten months old, it should be thin enough to be taken through a nursing-bottle. It should be given just milk-warm; and when it is, a few grains of bicarbonate or carbonate of potassa or soda ought to be added.

To keep cow's milk as long as possible without turning sour, it should be boiled at once, and set in a cool place, if not in the ice-box. Where there is neither a cool place nor an ice-box, the following plan is a good one: Pour the whole amount of boiled or skimmed milk the infant is to have during the day into a number of two or four-ounce bottles; fill them to the neck, and then cork well. Wrap a wet linen or cotton rag around the bottles, and set them on a plate half filled with water; keep the plate standing in the airiest place to be found, say between door and window. The evaporation taking place from the moist rag, with its cooling effect, will prevent early decomposition.

The common anxiety to procure the milk of one special cow for infants is based on a mistake. The child that has become accustomed to one, will suffer from the abrupt translation to the milk of another animal—a transition which is often inevitable; and, besides this, the milk of a special cow may, by accidental changes in the food, undergo frequent and unexpected changes. The plan of giving the average milk of a farm is, on the whole, the safest that can be pursued.

Condensed milk also is to be recommended, the addition of loaf sugar that is made in the manufactories being rather an advantage than otherwise. When used, it must be diluted according to the degree of condensation, which is generally from *four* or *five* to *one*.

In summing up the address above referred to, Dr. Jacobi says: "If I were called upon to write out a few brief and intelligible rules on the feeding of infants in general, they would read as follows:

"I. About Nursing Babies:—Overfeeding does more harm than anything else. Nurse a baby of a month or two every two or three hours. Nurse a baby of six months and over, five times in twenty-four hours, and no more. When a baby gets thirsty in the mean time, give it a drink of water or barley water. *No sugar.* In hot weather—but in the hottest days only—mix a few drops of brandy or whiskey with either water or food, the whiskey not to exceed a teaspoonful in twenty-four hours.

"II. About Feeding Babies:—Boil a teaspoonful of powdered barley (grind it in a coffee-grinder), and a gill of water, with a little salt, for fifteen minutes; strain it and mix it with half as much boiled milk and a lump of white sugar. Give it lukewarm, through a nursing-bottle. Keep bottle and mouthpiece in a bowl of water when not in use. Babies of five or six months, half barley water and half boiled milk, with salt and white sugar. Older babies, more milk in proportion. When babies are very costive, use oatmeal instead of barley; cook and strain. When your breast-milk is half enough, change off between breast-milk and food."

Diseases of Infants.—Most of the diseases to which infants are liable, such as chicken-pox, croup, cholera infantum, diarrhœa, measles, scarlet fever, thrush, whooping-cough, etc., are treated of under their several heads. The suggestions given in the article on CHILDREN concerning the "Signs of Disease" apply equally to infants, and should be studied carefully by all who have infants in charge. Fortunately, if proper attention be given to the rules of health, children at this early stage are seldom afflicted with any diseases beyond the difficulties which will be mentioned further along under "Teething," and that complaint which makes summer a terror to most mothers.

"Summer complaint" comes generally from over-feeding, and hot and foul air—never from teething. In treating it, keep the doors and windows open, so as to ensure abundance of fresh air. Wash the child with cold water at least twice a day, and oftener in the very hot season. When there is vomiting and purging, give no milk nor anything to eat or drink for four or six hours, but all the fresh air possible; after that time give a few drops of whiskey in a teaspoonful of ice water every ten minutes, but not more, until the doctor comes. If the symptoms continue, and medical aid is not at hand, try one of the remedies recommended in article on cholera infantum. Give no laudanum, or paregoric, or soothing syrup, or teas.

Sleep of Infants.—It is a rule which should be established at birth, and persisted in constantly, that the infant should not sleep with its mother. It is better for both mother and child that they sleep away from each other; and if the habit is never formed, no difficulty or inconvenience will accrue from it. Another rule which ought to be acted on is to accustom the

child to going to sleep at the proper time without rocking, fondling, walking about, or trotting on the nurse's knees. It should be laid on the bed or in its crib wide-awake, and left. In most cases, if it has not previously been spoilt, it will go quietly to sleep, if sleepy, and if it is not sleepy, it had better remain awake. It is astonishing how early this habit may be formed, and we need not point out how much trouble and annoyance it will save during the first three or four years of the child's life.

The sleep required by a very young infant is indefinitely large, and its instinctive disposition to indulge in it should never be interfered with, but, on the contrary, should be greatly encouraged. Healthy infants will and should sleep at all times, and a daily slumber in addition to the nightly one is required by every child until it is at least two years old. Sleeplessness is always an indication of derangement of function, or of organic disease. For the first three or four months of infancy any strict regulation as to habits of sleeping can scarcely be carried out; but by the time they attain their third some steps may be taken in this direction. For instance, young infants often begin their lives by sleeping more by day than by night—a very troublesome and inconvenient habit, but one difficult to alter; yet, as soon as the infant begins to take notice, his nurse should endeavor to keep him awake as the evening draws on, by arousing his attention to everything around, and by fondling him actively in her arms. Thus, by slight fatigue and longer wakefulness, she will be preparing him to settle down quietly later in the evening. As soon as possible, suckling or feeding a child at night ought to be discontinued; after the first month sleep at night will be more salutary to the child than food. From its birth to the age of six months an infant should have two sleeps a day, one in the morning, the other in the afternoon, each of an hour's length. After the sixth month one sleep at about mid-day will be sufficient; and this habit should be continued until the end of the third year of the child's life, and even to a later period if the child be weakly.

In rousing young children from sleep the gentlest means should be employed, not violent shaking or loud speaking. It is extremely hazardous to startle or shock children when they are awake; but to rouse them from the unconsciousness of sleep into a state of terror is not only cruel, but may cause serious injury. A boisterous, rude, or harsh nurse may in this way make an impression of horror on a child's mind that no subsequent gentleness or kindness can efface. It is best under all circumstances to let the sleep come to its natural close.

Teething.—The first set of teeth (or milk teeth) usually appear in the following order:—Two front, in each jaw (incisors), appear about the seventh month—lower teeth first; one tooth next to each of the preceding, two in each jaw (lateral incisors), from the seventh to the tenth month—lower teeth first; first grinding teeth (anterior molars), about the close of the twelfth month—irregular in their order; stomach and eye teeth (canines), from the fourteenth to the twentieth month—irregular in their order; back teeth (posterior molars), from the eighteenth to the thirty-sixth month—irregular in their order.

A healthy child that is nursing does not usually give much indication of disturbance at the time of teething, except by an excessive flow of saliva, or, as it is commonly called, "drooling." Perhaps it will have more than the customary number of discharges from the bowels in the twenty-four hours, and it may occasionally be a little feverish or restless. If the gums are examined at this time, it will be found that the ridge, which has previously been visible along the edge of the jaw, has entirely disappeared, and the gum is full and rounded. After a few days, the point of a tooth makes its way through the membrane which has covered it, and the remainder of its crown soon appears. The slight disturbance which has previously existed then disappears, and returns only when another tooth is about to come through.

This is the healthy and natural process of teething, which is but rarely interrupted by accidents or mishaps; for, indeed, the disturbances incident to the period are too frequently exaggerated. When the child keeps perfectly well, there will seldom be pain produced by the pressure of the tooth on the gum, which not only keeps the child from sleeping, but from obtaining a moment's rest. This pain is rarely constant and severe. When the child's mouth is examined, there is nothing found in most cases but more or less swelling of the gums. When the tooth is near cutting through, a slight depression is found on top. This depression results from gradual decay of the tissue under which the tooth is gently pressing upwards. The whole process is gradual and mild, like every change in the organism, as long as circumstances are favorable and the general health good. Only when the gums are unusually hard or inflamed there is some danger that, by the exhaustion and irritation which are thus produced, the nervous system of the child will become deranged, and convulsions follow. To avoid this danger, the gum should be divided with a lancet so as to let the tooth through. When the gum is in the condition above described, no harm can possibly result from its division, provided it is properly done. A cross cut (like this, X) should be made directly on the top of the tooth and down to it. No blood-vessel can be touched in this way, so there can be no danger of excessive bleeding, and the common belief that it is injurious to the child can have no foundation. It may, perhaps, be best to add that *if* there is much bleeding it can usually be stopped by taking a clean and soft linen towel and pressing it with the finger firmly

against the gum. If this fails to stop it, a little powdered alum may be put on the finger and pressed against it, or what is better, if a drug-shop is near, a little *tannin* may be gotten and used in the same way. In the country, when neither of these is at hand, a strong tea may be made with white oak or hemlock bark, and a soft piece of linen saturated with it pressed firmly against the gum. As a rule, gentle pressure with two fingers is amply sufficient. During the time in which teeth are pressing, care should be taken that the child's bowels be kept open—that is, that there should be at least one good movement from them every day. Two, even, may be allowed to occur; but when there are habitually more than this, and more especially when these are very loose, watery and offensive, *they should be checked without delay.*

In some cases the effects of the growth of the teeth are manifested not on the bowels alone, but (either with or without diarrhœa) on the nervous system, and we have restlessness, involuntary twitchings of the mouth, starting during sleep, and sometimes even a crying out, as if from fear. When these symptoms occur there is more or less danger of convulsions, and it is best, therefore, to consult a physician concerning them. In this case, the cause of the general derangement will be found in some disease which has nothing to do with teething. It requires the knowledge of an educated physician to find it out. A physician who is always ready to explain every disease or disturbance in a child by teething ought not to be trusted. A warm bath may be given to the child just before it is put to bed.

Weaning.—The change from milk to solid food is called weaning, and is a very grave matter. The best time and method of weaning a child depend upon circumstances. Of these, the season of the year is one of the most important. A child that may properly be put on solid diet in October could not be so in June without running the greatest risk of being dangerously sick in July and August. If the child is thriving, gaining rapidly in strength, and contented with the breast-milk, it will be well to allow him to continue to nurse a month or two after the usual time. It is a great mistake to believe that a child will thrive better on breast-milk than artificial food after a certain time. When two or four teeth are through, the time for gradual weaning has arrived. This will usually be when the baby is eight or ten months old. When the child has no tooth at that time, there is something wrong. Usually the milk of the mother is not sufficient for the full and healthy development of the child. In such cases the weaning of the child is frequently the best cure. A physician ought to be called in to decide the question. To defer weaning the child beyond the time when six or eight teeth are through is simply criminal. Many diseases, such as rickets and life-long debility, and lingering, result very frequently from nursing which is continued too long. A selection of the proper articles of food for children may be made from those articles of food which will be mentioned as fitted for weaned children. When the mother furnishes an insufficient supply of milk for the child—which may be known by its constant hunger and the inability of the mother to supply it—he may, if two or four are through, be either entirely or partly weaned, even though Summer is approaching. If no teeth are through, he should be partly weaned—that is, he should be fed in part and nursed in part. Thus he may be allowed to nurse two or three times in the twenty-four hours, his other meals being of more or less solid food and milk. When the mother's milk disagrees with the child, as it sometimes will, there of course remains no choice, except between weaning and providing a wet nurse.

Whatever may be the season, it is better to make the change from nursing to feeding a gradual rather than a sudden one. The infant should be accustomed to nurse at longer intervals, and, the number of times being reduced to one, it may be entirely discontinued. If there is any trouble in making the child give up nursing, a little finely-powdered Peruvian bark or myrrh, dusted on the nipple before it is put into his mouth, will give him a disgust for it that will not permit him to take it again.

The articles of diet to which the child may be gradually accustomed at weaning are (besides milk) bread, butter, which must be entirely sweet and not very salt; for older children only, soft-boiled eggs, simple broths, and plain roasted or boiled meats. Oysters are nearly as easily digested as meats, but not all children like them, and it must be remembered that they have a tendency to open the bowels. Boiled meats are not so good as roasted, the former containing much less of the nutrient materials than the latter, in a less desirable condition. Broiled meats are also good, but fried are to be avoided. Fish is to be shunned, as are all salted meats. Barley, oatmeal, and farina are the best possible food for a child, well cooked and mixed with milk, or sometimes beef soup or beef tea. Baked potatoes are much better for children than boiled, and sweet potatoes are more readily digested than the common white potato. Whichever is used, it should be thoroughly baked or roasted, the skin taken off, and a little milk or cream or butter put on it after it is mashed. Still, potatoes are better food for older children, and should not be given soon after weaning. Meats should be thoroughly cooked, but not done very hard; a beefsteak that is still red in the inside when cut, has far more nourishment in it than one that is brown throughout.

A little milk may temporarily soothe thirst, but is not the proper thing for it. Tea and coffee are injurious. Cool water is the only thing to satisfy thirst. A thirsty adult does not drink beef tea, or milk, or chocolate,

but water. Milk is food to quench hunger, but not the common beverage. In summer time give a child, where there is danger of diarrhœa, toast water, rice water, or barley water. Sugar ought not to be mixed with a child's beverage. It makes him drink more greedily at unnecessary times, and sours his stomach.

INFLAMMATION. — External inflammation is characterized by four symptoms, either of which occurs by itself in other forms of disease, but not grouped together. These are: 1st, *swelling;* 2d, *pain;* 3d, *redness;* 4th, *heat.* Whenever, therefore, these four symptoms exist, there is said to be inflammation present; when they are severe in degree, there is always fever accompanying them. Internal inflammation is recognized only by the occurrence of pain and disturbance of function, generally accompanied with acceleration of the pulse and with fever of a kind called inflammatory. In either case, inflammation is rather a symptom of other diseases than a disease in itself, and cannot be treated independently of its cause. When it appears on the surface it may generally be reduced by soothing and cooling applications, especially of cold water.

INFLUENZA.—The symptoms of influenza are very similar to those of a severe cold. The eyes become watery, and there is a persistent tendency to sneeze; discharge from the nose, cough, fever, and oppression at the chest soon ensue. But the distinctive characteristics of influenza are a dull pain in the forehead, which is very oppressive, and extraordinary prostration of strength, with mental depression, langour, and utter want of appetite. The skin is generally moist, and the perspirations which occur are not critical, as they seem to be in certain cases of fever. As the disease advances, the discharge from the nose irritates the upper lip, so as to make it red and tumid.

Treatment.—Any one attacked with influenza should give up at once, and after taking a warm bath, go to bed and remain there for two or three days, encouraging perspiration by every means in his power. If it can be had, ten grains of Dover's Powder with a little sugar should be taken, and repeated if needful. What is known as wine-whey is also very useful (to make it, *see* WINE-WHEY.) A wineglassful of this may be taken quite frequently. Rest, and a liberal but not stimulating diet, will soon bring about a cure. Take ten grains of quinine at bed-time; or two, repeated, four times a day.

INFUSION.—Infusions are made by pouring water, either boiling, merely warm, or even cold, upon some vegetable substance and letting it stand for some time without further boiling. It is evident that the water here can only extract such matters as are soluble in that fluid, and infusions are seldom very strong. The beverage called tea is an infusion of tea-leaves.

INGRAFTING. (*See* GRAFTING.)

INGROWING NAIL. (*See* TOE-NAIL.)

INJECTIONS.—Injections are given sometimes to move the bowels, and at other times to check them. In the former case the quantity of fluid is the chief thing, and an injection of tepid water simply, or water with a little soap in it, to prevent its rapid absorption by the bowels, is generally the most effective and always the most harmless way of bringing about a discharge from the bowels. In all cases of constipation, in young children especially, the effect of an injection should be tried before any medicine is given. It makes little difference what kind of syringe is used, but it should be large enough to hold the entire quantity to be given at one time. Injections for checking the bowels always contain an active drug, and should never be given except under a physician's advice. The syringe for these should be smaller than for the other kind of injection.

INK. (Black).—A good black ink can be made as follows:—Take a gallon of rain or soft water, and three-quarters of a pound of blue-galls, bruised; infuse them three weeks, stirring daily. Then add four ounces each of green copperas and logwood chips, six ounces of gum arabic, and a wineglassful of brandy.

Marking Ink. To make a good marking ink take of lunar caustic, two drachms; gum arabic, half a drachm; distilled water, two drachms. To be well mixed, and kept in a small stopper-bottle, and in a dark place, as the lunar caustic loses its virtue by being exposed to the light. The linen to be marked upon must be previously prepared with the following mixture:—Sub-carbonate of soda, half an ounce; gum arabic, one scruple; dissolved in one ounce of rain water. With this mixture wet as much of the linen as is to be written on. Let it become perfectly dry. Then write upon it, and dry the writing in the sunshine as rapidly as possible.

INK STAINS.—Use salts of lemon, which is a mixture of oxalic and citric acid, or oxalic acid may be used alone. Old stains may be removed by a solution containing 3 oz. muriatic acid with 3 oz. of tin-salt, — protochloride of tin. To remove ink stains from delicate colors, which would be injured by the above agents, a solution of pyrophosphate of soda, prepared by calcining ordinary phosphate of soda for half an hour, will after a time remove the stain.

Indelible Ink Stains, or those caused by nitrate of silver (lunar caustic), may be removed by applying a solution of bleaching powder, or Javelle water, and afterwards washing with ammonia. Cyanide of potassium may also be used, but is so poisonous that it is advisable to avoid its use if possible.

Ink spots on floors can be removed by scouring them with sand wet in a mixture of water and oil of vitrol. Rinse them, when the ink is extracted, with strong pearl-ash water.

INSANITY.—The causes which may lead to insanity, particularly in those whose mental condition is weak, are very numerous. One of the most fertile causes in this country is drunkenness. Excessive study, strong mental ex-

citement, grief, jealousy, love, disappointment, also lead to it, and religious excitement is a not unfrequent cause. In many cases it is hereditary, and this is one of the most terrible features of the dreadful disease. It is usual to distinguish insanity under different kinds:—1. *Moral insanity*, in which there is a morbid perversion of the feelings, affections, and active powers, without any corresponding defect in the understanding. 2. *Intellectual insanity*, affecting the reasoning powers; this may be either general or partial—the latter is called monomania. 3. *Mania*, or *raving madness*, in which the mental faculties are wholly impaired, and the patient gives way to all sorts of extravagances, frequently doing mischief to himself and others. 4. *Dementia*, or *imbecility*, when the mental powers become gradually impaired, the sensibilities diminish, and at length the patient becomes callous or dead to all that is going on around him. Usually, however, two or more of these kinds occur together. Moral insanity frequently manifests itself in a desire to steal. In monomania, the patient reasons correctly on all matters except one, which forms the subject of his insanity. Imbecility usually commences with the loss of memory and the power of concentrating the attention, for any length of time, on one subject; then all control is lost over the thoughts, and the mind wanders meaninglessly from one subject to another; at length there is a heedlessness of all that is going on around, and life becomes a mere existence, the mental faculties being entirely lost.

Sometimes insanity comes on quite suddenly, without any warning whatever; at other times there is a previous derangement of the bodily functions, loss of appetite, restlessness, and inability to sleep. The chance of recovery depends largely on the complication or otherwise of insanity with other diseases, especially epilepsy or paralysis, with either of which it is nearly hopeless. It is also influenced by the form of the disease, the period of its duration, the age, sex, and constitution of the patient. The mean duration of cases terminating favorably is from five to ten months; after the latter period, recovery is very doubtful. In advanced life, insanity is generally permanent and imbecility is very rarely curable.

Upon the question of *home treatment* in cases of insanity, there must always be a struggle between prudence and affection, judgment and feeling; but the almost universal opinion of the medical profession is in favor of hospital treatment for *all* recent cases. It must be recollected that insane asylums are very different in our day from those of fifty years since; and that, though still fulfilling the function of asylums for the chronic insane, and affording protection to the community from insane violence, their crowning glory is the humane and efficient *treatment* they afford. It is well-nigh impossible that home treatment should be as effective as that given by experts who have made insanity a special study, and in dealing with it have the incalculable advantage of experience; and in point of fact statistics show that the chances of recovery in a hospital are about five times as great as at home. If this is not conclusive as to the question of home treatment, we may add that the presence of friends and relatives seldom fails to excite and exasperate the patient; they have rarely the moral qualities necessary for the care of an insane person, nor have they the assistance and appliances at hand to enforce control, without recourse to a degree of violence which must prove injurious to the sufferer. There is a varying period at the outset of mental diseases, during which the experiment of home treatment may be tried under competent medical advice; but this period must not be improperly prolonged. It may be availed of to satisfy both the patient and his friends that hospital treatment is demanded; and when this is seen, neglect to adopt it is not only mistaken but criminal. In cases manifestly incurable from the first, home treatment may be pursued as long as safety will permit, or the patient's means allow; and there are certain forms of insanity,—such as *general paralysis*, *epileptic mania*, *hysterical mania*, *climacteric insanity*, etc.,—in which it may be best. But in all cases, and at the earliest symptoms, the advice of a physician should be sought.

INSECTS.—*See* ANTS, BED-BUGS, COCKROACHES, FLEAS, FLIES, MOSQUITOES, MOTH, and FLORICULTURE.

INSPISSATION.—The process of thickening any liquid solution by evaporating part of the water over a fire. This process, with most animal and vegetable substances, is best performed in a water-bath, to prevent burning. It is often adopted for the purpose of rendering a solution or an infusion stronger.

INTERMITTENT FEVER. (*See* AGUE.)

IRIS.—One of the prettiest of the early Spring flowering bulbs. Its culture is exactly the same as that of the hyacinth, except that in planting out of doors the bulbs should be set three inches deep instead of four. Choice varieties are: *I. Cristela*, light blue, in May; *I. Florentina*, white, in June; *I. Germanica*, blue, in June; *I. Pumila*, purple, in May.

IRISH STEW. (*See* under MUTTON.)

IRON (*Polishing*).—Similar to a flat-iron. The edge and point are rounded, and the whole so highly polished as to leave a much smoother surface than the ordinary iron.

IRONING. (*See* WASHING.)

IRON-WARE.—Iron rust or oxide of iron, so far from being hurtful, is frequently prescribed as a tonic; and the only inconvenience arising from employing the metal in its pure state is its liability to rust, thus wearing into holes; and, in this case, it is also apt to tinge the color of food prepared in it. On this account, sauce-pans, tea-kettles, and other utensils made of iron, should be tinned over to prevent rusting. Cast-iron is much less apt to rust than hammered or rolled. Iron kettles, lined with porcelain, are best for preserves; the German are superior to many

others. Too hot a fire will crack them; but, with care in this respect, they will last for many years. There is one method by which, even without tinning, the disagreeable effect produced on food by cast-iron when it rusts may be almost entirely prevented. If, instead of scouring the inside of boilers, stew-pans, etc., with sand, they be simply washed and rinsed out with warm water, and wiped with a soft cloth, the surface of the metal will soon become covered with a thin crust or coating of a dark brown color, resembling enamel; this enamel, if it be suffered to remain and consolidate, will at last become so hard as to take a very good polish, and will serve very efficaciously to defend the surface of the metal from corrosion, and, consequently, to prevent the food from acquiring that color and taste which iron alone is apt to impart to it.

Polished iron may be preserved from rust by going slightly over it with copal varnish, mixed with nearly an equal quantity of spirits of turpentine and as much sweet oil as will give the mixture a little greasiness. Lay on this mixture with a bristle brush, and see that no dust or ashes gets to it while drying.

Iron exposed to the weather may be preserved as follows:—Boil eight pounds of hog's fat, cut very small, in a glazed pot or pipkin, with three or four spoonfuls of water; when melted, strain it through coarse linen; then set it on a slow fire, with four ounces of camphor broken small, allowing it to boil gently. Take it off, and, while hot, mix it with as much black-lead as will give it color and consistence, and lay it on hot. This will not only protect the iron in the atmosphere from rust, but also whatever portion may be in the ground.

ISINGLASS.—A very fine kind of gelatine, procured from the swimming-bladder of the sturgeon. There are inferior kinds, which are taken from the intestines of the cod and other fish. It is imported from Russia, Brazil, and the West Indies. The first of these is by far the best in quality, while that from Brazil is very impure, and scarcely fitted for culinary purposes. When dry, isinglass is semi-transparent; but on contact with the water it soon becomes opaque and swells, and dissolves slowly, leaving a very slight residuum of cellular membrane, so thin as not to be perceptible without a very careful examination. If there is much sediment when it is dissolved, the isinglass is not pure. Russian isinglass makes a transparent jelly when cold, but that from Brazil has a somewhat milky hue. Isinglass is adulterated by substituting the inferior qualities for the superior, but chiefly by selling common gelatine as isinglass. To distinguish the one from the other, *see* directions given under GELATINE.

To melt a quarter of a pound of isinglass, take a little more than a pint of water, into which throw the twelfth part of the white of an egg; beat the water well till it becomes white; then put the isinglass into it, and set it over a very slow fire. If it is kept covered it will melt more easily. Take care that it does not brown, as in that case it can never be made clear, and will have an unpleasant taste. For a larger quantity, use more water, but not more white of egg. If the isinglass is required to be particularly clear, squeeze into it the juice of a lemon.

ITCH.—This very disagreeable cutaneous disease seldom attacks any but those of dirty habits or trade, and common cleanliness will generally prevent it; but, as it is infectious under certain conditions, it sometimes gets into respectable circles. The disease is known by the appearance of little pimples or vesicles, filled with a watery liquid, which, by scratching, acquire little black heads. These pimples usually exist between the fingers and on the wrists and inner surfaces of the elbows when other parts of the body are affected; they never appear on the face. The itching is most excruciating, and is generally augmented at night by the warmth of the bed.

Treatment.—Sulphur is the grand specific for itch. It does little good taken internally, but the ointment (made by mixing sulphur and lard together in about equal proportions) should be well rubbed over the entire surface of the body night and morning, until the eruption disappears. The sulphur, of course, has a very disagreeable smell, but this may be disguised in various ways. Another remedy is a strong solution of the iodide of potassium, which should be put on all the affected parts every night and left to dry on. This has the advantage of having no smell, but is of questionable efficacy. The bedding used by a person having the itch must be thoroughly aired and fumigated, and the clothing boiled with plenty of strong soft soap.

IVORY—Is obtained from the tusk of the elephant, and the teeth of the hippopotamus and walrus. Until seasoned by use, it cracks very easily, and should never be exposed to sudden changes of temperature. Billiard balls, for instance, if taken from one room to another of very different temperature, should not be used till they have had time to gradually change their temperature. Ivory, when wet, should always be promptly wiped. New ivory, when not in use, may be advantageously kept smeared over with olive-oil, the absorption of which closes small cracks.

Carvings in ivory, when not kept under glass, are apt to become covered in time with a multitude of minute cracks, which get filled with dust, and deface them. To remove these, the ivory should be washed in warm water with soap and a brush until the cracks disappear; after which it should be placed under glass for preservation. Glass not only protects ivory, but affords the means of bleaching or whitening that which has been discolored. This effect is produced by exposing it, still under glass, to the sun's rays, turning each side in succession to the sun.

Ivory may be *silvered* in the following manner:—Immerse it in a weak solution of nitrate of silver, and let it remain till it has acquired a

deep yellow color; then take it out, wash it in clean water, and expose it to the sun's rays, which will turn it black in about three hours. Upon being rubbed briskly with a cloth, the ivory will acquire a silvery lustre.

IVY.—This is the most popular of the ornamental evergreen vines, and is equally adapted for garden or indoor culture. In the garden it requires a shady spot, where the soil is moderately rich, and especially where the winter sun will not strike upon it. In our climate it is killed far more often by this latter cause than by the actual cold of winter. It requires a great deal of moisture in order to flourish, and in fact too much water can hardly be given it during the hot weather of summer. It should be planted near some wall, or fence, or house, so as to get support as it grows.

The ease of its culture, its beautiful foliage, its rapid growth, and its evergreen character, all combine to render it a popular ornament for the parlor. The soil for its growth indoors should be a very rich loam; and here also a plentiful supply of water is required, though it should never be allowed to stand at the roots. Slips root easily, taken off at any leaf joint, and placed either in earth or water; in the latter they will soon throw out roots, and may then be transferred to pots. The only precaution to be taken in growing ivy is to keep it from frost while in growth; and if it be frozen, to keep the sun away from it, thawing it out with cold water.

There are many species of ivy, of which the most common is the English ivy (Hedera Helix), of which there are many varieties. The distinctions between these lie chiefly in the leaves, which vary greatly in shape. There are two very beautiful kinds, the silver and the golden, the foliage being beautifully variegated with white and gold. The *Tree Ivy* is merely a form of the common ivy, as is shown by its returning to its primary form not infrequently. The leaves are entire, and the plant often retains its arborescent form for years. In the *Irish* or *Giant Ivy* (*H. Cannariensis*), the leaves are five lobed, and larger than those of the common ivy. *H. Rocqueriana* is a variety with large heart-shaped leaves. *H. digitata*, the hand-shaped ivy, is a pretty variety, of rapid growth, the leaves are small, dark, and veined. The *Golden Ivy* is a splendid plant; when the young leaves come out it resembles a mass of yellow flowers. The plant commonly called *German Ivy* is not an ivy, but it is deservedly popular from its rapid growth and its freedom from insects. *Five-leaved Ivy* is the well-known Virginia Creeper or Woodbine.

IXIA.—A variety of the Cape Bulbs, remarkable for the brilliancy of its flowers. It is of easy growth, but in our climate it can be raised only in the greenhouse or in the parlor, as the least frost kills it. Plant about the latter part of November in a compost made of one part sandy loam and one part peaty earth, with a little well-decomposed dung, in new clean pots; fill the pots about an inch deep with small crocks to secure good drainage, as without this the plants will not thrive. Place the pots in a cool place till the plants begin to grow, then place them in a strong light on a shelf close to the window; the closer to the glass the better for the plants. The temperature for Ixias is about forty degrees at night to sixty by day. Five or six bulbs in a ten-inch pot are quite sufficient, but never mix the varieties. By the latter part of January the flower stalks will begin to appear, as they are very slender they should be secured to neat stakes. Soon after blooming, the leaves begin to turn yellow, and the plant indicates a desire to rest. Unless it is desirable to ripen seed, the plants should be allowed to dry off gradually, and the pots then placed in a dry place till next autumn.

Seedlings may be easily raised. Sow the seeds thinly, about the first of October, in the same soil used for bulbs; let the seedlings remain in the pot one year; then transplant and treat as old bulbs; they will bloom the third year if well cared for. The most usual mode of propagation, however, is by offsets; separate these before potting, and they will soon make flowering plants.

Among the choice varieties of the Ixia are: *I. Alba Oculata*, white shading to yellow, with dark chocolate eye, very fine; *I. Capitata*, white and black; *I. Conica*, orange; *I. Conchiflora*, buff colored; *I. Crispa*, blue; *I. Crocata*, orange-yellow, very fine; *I. Cratenoides*, dark yellow; *I. Erecta*, white or flesh-color; *I. Kermisiana*, vermilion; *I. Squalida*, rosy lilac; *I. Viridiflora*, variegated, finest of all.

IVY (Poison). *See* POISON PLANTS.

J.

JACKET. (*See* SACQUE.)

JACONET.—A light, open and soft cotton fabric, stouter than muslin, used for dresses, neckties, etc., and quite durable. It comes in pieces a yard wide, and should be shrunk thoroughly before using.

JAM.—Jams and marmalades are made in the same way, and differ little from each other, except that the latter are made of the firmer fruits, as pineapples, peaches, apricots, etc., while jams are made of the more juicy berries, such as blackberries, currants, raspberries, strawberries, etc. They both require great care and attention in boiling, as the slighest degree of burning communicates a highly disagreeable taste. They must be boiled suffi-

ciently and must have plenty of sugar or they will not keep.

Blackberry Jam.—Put the fruit on alone, and boil for half an hour, mashing and stirring well; then add three-quarters of a pound of sugar for every pound of the berries, and cook twenty minutes longer. Keep in small jars, with brandied tissue paper over the top, in a cool closet. Blackberry jam is very wholesome for children.

Carrot Jam.—Boil some carrots till quite tender, mash them well, and rub them through a sieve. To each pound of the pulp, add three-quarters of a pound of sugar; boil it to a jam, and when nearly cold add the juice and grated rind of two lemons, and half a teaspoonful of essence of cloves or nutmeg. This jam is not very good as compared to some others, but it is better than nothing, and is very wholesome.

Currant Jam. I. *With Black Currants.*—To every pound of black currants add a pound and a quarter of sugar; boil the currants three-quarters of an hour gently by the side of the fire; then add the sugar and boil an hour and a quarter longer, taking care that it does not burn. This is one of the best jams, and in a cool, dry closet will keep from eighteen months to two years. It is much improved by adding one pound each of red and white currants to four pounds of black currants.

II. *With Green Currants.*—Weigh a pound of sugar to every pound of unripe red currants; set the currants over the fire, broken up with the hands; boil carefully half an hour, then add the sugar; boil one hour, carefully skimming it the while.

III. *With Red or White Currants.*—Let the fruit be very ripe; break it up; to every pound weigh fourteen ounces of sugar; boil the fruit half an hour, then add the sugar, and boil it about an hour and a half, stirring it constantly.

Gooseberry Jam.—Use fruit that is nearly ripe; pull off the stems and withered flowers, wash in cold water; heat slowly and boil until perfectly soft; add a pound of sugar to every pound of fruit and boil until thick and clear.

Greengage Jam.—Take off the stems and wash the fruit; heat slowly and boil in its own juice until perfectly soft; add a pound of sugar to every pound of fruit, and boil until clear and thick. Put it up in large tumblers; cover with two papers, the smaller one dipped in alcohol and placed on the fruit; the other pasted over the top of the tumbler.

Raspberry Jam.—This is very nice made in the same way as blackberry jam. It is greatly improved, however, by adding a pint of currant-juice to every four pounds of raspberries.

Rhubarb Jam.—The rhubarb should be wiped not washed, and it should be fresh and young; peel the stalks, and cut them up into half-inch pieces; put into a preserving-pan equal weights of rhubarb and loaf sugar, and the juice of two lemons to every five pounds of rhubarb and sugar; or the stalk may be first boiled with half the quantity of sugar, and the other half added; boil slowly, constantly stirring; and then boil three-quarters of an hour, skimming as long as scum rises, or till it becomes a smooth pulp, and a thick jam, which leaves the bottom of the pan when stirred. The grated rind of one lemon may be added to each pound of rhubarb and sugar. A less expensive jam may be made with less sugar than the above.

Strawberry Jam.—This also may be made like blackberry jam; but the flavor is much finer if a pint of currant juice be added to every four pounds of strawberries. Boil the strawberries in the currant juice for half an hour, stirring continually; then add the sugar (three-quarters of a pound to each pound of fruit), and boil rapidly for twenty minutes, skimming carefully.

JAPONICA.—This is the scarlet-flowered Japan Quince, a well-known shrub which should be found in every garden. It produces quantities of the richest scarlet flowers close to its branches, and is very easy to cultivate. Culture same as for LILAC.

JASMINE or JESSAMINE.—A favorite family of climbing shrubs, which grows wild in the southern portions of the United States, and further north is very desirable for window culture. The foliage is neat, and the flowers white or yellow, and produced from February to June; they are extremely fragrant. The soil should be equal parts of loam and peat with a slight admixture of sand. Water should be given rather freely. The plant should be trained on neat trellises, and the branches allowed to droop. The only insect attacking them is a scale, which a little care in washing will soon remove.

The most desirable varieties are: *J. Azoricum*, white flowers in summer; *J. Multiflorum*, white flowers in spring; *J. Nudiflorum*, yellow flowers in spring; *J. Odoratissimum*, yellow flowers in spring.

JAUNDICE.—A disease characterized by yellowness of the skin, and eyes, and urine, the discharges from the bowels being of a whitish or clay color. It is caused by the excretion of bile being prevented and retained in the blood, or reabsorbed and diffused through the system. It depends upon various and different internal causes. Pregnant women frequently suffer from it. Any kind of pressure upon the excretory ducts, such as by tumours, etc., or the ducts being filled up with mucus, inspissated bile, or biliary calculus will occasion it. It may also occur as a symptom of chronic or acute inflammation of the liver. Fits of anger, fear, or alarm, have sometimes been directly followed by an attack of jaundice. And, lastly, certain forms of it are produced occasionally by long-continued hot weather. An attack of the jaundice is usually preceded by symptoms of a disordered state of the liver and digestive organs, loss of appetite, irregular or constipated bowels, colic, nausea, headache, languor, etc. Sooner or later the yellow color begins to ap-

pear, usually first in the eye, then in the face, then on the chest, and finally covering the whole body. Sometimes the yellowness is the first symptom; and again, as soon as the yellow stage is reached many of the preliminary symptoms diminish. The shades of yellowness are various, from a light yellow to a deep orange hue, and in some cases of a greenish, or even a blackish color—in the latter cases it is known as "black jaundice." The greenish or darkish varieties are considered most dangerous.

Treatment.—Some kinds of jaundice are absolutely irremediable, while others will pass off without any treatment. If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently or is complicated with dropsy or other diseases, the condition upon which it depends generally leads to a fatal result. In general, the obvious treatment is to promote secretion of the bile and to favor its removal. In ordinary cases, a strong infusion of rhubarb root taken freely, so as to keep up a laxative action, without active purging or vomiting; a cool, light, and laxative diet (such as ripe fruits, mild vegetables, chicken and veal broth, new eggs, stewed prunes, and buttermilk); free ventilation, and hot fomentations, twice a day for half an hour, over the liver in case of torpor and obstruction; or cold cloths in case of excessive production of bile, will usually effect a cure. As much exercise should be taken as the patient can stand; and if there be any spasmodic pain in the right side, the patient should sit frequently in a warm bath up to his shoulders. *Any* attack of jaundice may turn out seriously, and therefore as soon as the symptoms develope themselves a physician should be sent for. Persons subject to jaundice ought to take as much active exercise as possible, and should avoid all exhausting food and stimulating drinks.

JAUNE MANGE.—I. *Take:*—Isinglass, ½ oz; eggs, 6; sherry wine, ½ pt; boiling water, ½ pt; sugar; lemon, 1.

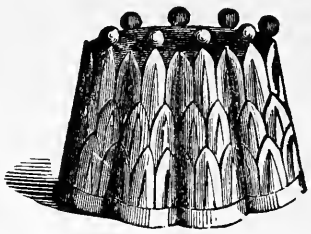
Soak the isinglass in cold water, then dissolve it in boiling water; beat the yolks of the eggs, and mix them with the wine and the juice of the lemon; sugar to taste (some of the lumps of sugar should be rubbed with the lemon peel so as to extract the oil.) Stir over boiling water until thickened. Strain; when nearly cold put into a mould that has been first dipped in cold water.

II. *Take:*—Gelatine, ¾ oz; lemons, 2; brandy, 1 wineglassful; raisin wine or sherry, ¾ pt; eggs, 7; sugar; water, 1 pt.

Put the gelatine into the water the night before it is to be made, adding a few bits of lemon peel; next day, put into a pint cup the juice of the two lemons, together with the brandy and the wine; pour this with the gelatine solution into a sauce-pan, and add the yolks of the eggs well-beaten, with sufficient lump sugar to sweeten it. Set it over a slow fire, stirring it continually till it thickens. Then strain it, and stir it occasionally until nearly cold, when it should be put into the moulds.

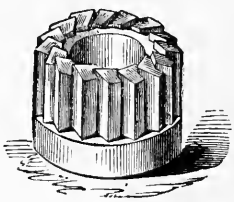
JEAN.—A twilled cotton cloth, of a rather firm texture, generally white but sometimes striped. It comes a yard wide, and should be shrunk before using. *Satin Jean* is woven with a smooth glossy surface, like satin, and is much superior to the common kind for certain purposes.

JELLY.—Jellies are made by boiling a chicken, knuckle of veal or calf's feet in water, slowly and for a long time. They



Jelly Mould.

were formerly supposed to be particularly nutritive and, therefore, an excellent diet for invalids; but physicians now appear to be of opinion that they are less so

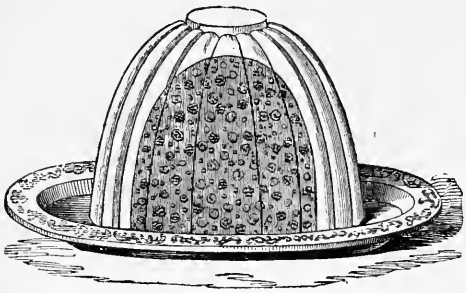


Jelly Mould.

and even less digestible, than the flesh or muscular parts of animals, poultry, etc. In making fruit jellies, care must be taken not to boil them too long, or they will soon spoil; from fifteen to twenty minutes are generally sufficient after the sugar has been added. Jellies should be poured into the pots or jars as soon as they are taken from the fire, by which means a sort of skin forms upon the top in cooling, which, if unbroken, will keep out the air. They should be cooled quickly, and kept in a dry but cool place. Cover the jars with brandied tissue-paper, cut so as to fit quite close. Towards the end of summer, jelly made during the summer should be examined, and if there is any sign of fermentation, it must be re-boiled; there is much more trouble on this head during some seasons (especially rainy ones) than others.

Fancy dishes made of jelly of two or more colors are very ornamental and are easily made. The two accompanying engravings will indicate how it is done, but with care more elaborate combinations can be effected.

Apple Jelly.—Take the apples (pippins are the best), wipe them clean and take out the stem and eye. Cut them in thin slices, without paring or coring; put them in a preserving-



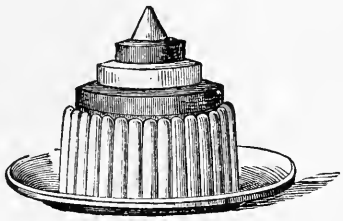
Jelly of Two Colors.

kettle, add just enough water to cover them, and boil them without touching until perfectly soft; put them away in the kettle if it is porcelain-lined; otherwise, slip them very carefully into a large earthen bowl, and leave them in a cool place for three days. At the end of that time, drain them in a straining-cloth, without pressing; add a pound of granulated sugar to every pint of juice, and boil for three-quarters of an hour; pour it into a pitcher, fill the glasses, and cover with one paper pasted over the top. Do not move the glasses until the jelly has cooled, as it is apt to soil the paper.

Arrowroot Jelly.—Mix a dessertspoonful of arrowroot with enough cold water to make it into a stiff paste; then pour on it half a pint of boiling water, stirring it briskly, and boil five or six minutes; when the jelly is formed add two tablespoonfuls of any white wine, a little lemon-peel, and sugar. If for young children, milk may be substituted for wine and water.

Aspic, or Savory Jelly.—Boil a couple of calf's feet, with three or four pounds of knuckle of veal, three-quarters of a pound of lean ham, two large onions, three whole carrots, and a large bunch of herbs, in a gallon of water, till it is reduced more than half. Strain it off; when perfectly cold, remove every particle of fat and sediment, and put the jelly into a very clean stew-pan, with four whites of eggs well beaten; keep it stirred until it is nearly boiling; then place it by the side of the fire to simmer for a quarter of an hour. Let it settle, and pour it through a jelly-bag until it is quite clear. Add, when it first begins to boil, three blades of mace, a teaspoonful of white peppercorns, and sufficient salt to flavor it properly, allowing for the ham, and the reduction. French cooks flavor this jelly with tarragon vinegar when it is clarified; cold poultry, game, fish, plovers' eggs, truffles, and various dressed vegetables, with many other things often elaborately prepared, and highly ornamented, are moulded and served in it, especially at large *déjeuners* and similar repasts. It is also much used to decorate raised pies, and hams; and for many other purposes of the table.

Barberry Jelly.—Strip the fruit from the stems, wash it in clean water, drain, bruise



White and Rose-colored Jelly.

slightly, and put it into a stone jar, without any water. Place the jar in a pan of water, and steam the berries until quite tender; this will require from half an hour to an hour. Pour off the clear juice, strain, weigh, and for every pound of the juice, add eighteen ounces of sugar; boil quickly from five to seven minutes. Unless the berries are quite ripe more sugar will be required.

Blackberry Jelly.—Prepare the fruit as for barberry jelly, put it into a stone jar, and set it on the fire in a pan of tepid water; cover it closely, and let it boil till the fruit is broken thoroughly to pieces; then strain through a coarse bag, squeezing it hard so as to extract all the juice. To each pint of juice allow a pound of sugar. Put the juice on to boil by itself, and while it is warming divide the sugar into several parts and put it into the oven in shallow pans or dishes; let it heat in these, and stir it occasionally to prevent scorching. Boil the juice just twenty minutes, and then add the heated sugar, stirring rapidly all the while; withdraw the spoon as soon as the sugar is dissolved. Let the jelly just come to a boil, then remove at once from the fire, and pour into glasses that have been previously dipped in hot water.

Calf's-foot Jelly.—Put four split calf's feet on to boil in a gallon of water, and continue boiling gently for four hours, or until the water is reduced to half. Then strain the liquor through a sieve, and when cold and a firm jelly, scrape off the grease, wash the surface with a little scalding water, and dry it with a soft hot cloth. Then put the jelly into a stew-pan, with two pounds of white sugar, the juice of six lemons and the rinds of four (cut fine), a bruised stick of cinnamon, and twenty-four coriander seeds. Set this on the fire, and add the whites of six eggs well whipped, with half a pint of water, and continue beating the jelly on the fire until it boils; then add half a pint of sherry or Madeira, and simmer gently for twenty minutes. Pass it through a jelly-bag into a bowl, and if it is not clear, repeat the process. The color may be heightened by a few drops of

burnt sugar. In cold weather, it should be strained before the fire, else the mixture will jelly before it has run through.

For invalids, this jelly is better made with brandy than with wine. Three wineglassfuls of brandy to two quarts of jelly will be the proper proportion, and the difference should be made up with water. Add the brandy, when the jelly has been once passed through the bag.

Calf's-head Jelly. (*See* CALF'S HEAD.)

Cherry (Wild) and Currant Jelly.—Take two parts of wild cherries (stones and all) and one of red currants; to a pint of juice allow a pound of sugar, and make as directed for blackberry jelly.

Cider Jelly.—Made same as Wine Jelly, below.

Crab-apple Jelly.—Put the apples into a kettle with just enough water to cover them, and let them boil until very soft; drain them untouched in a straining cloth. Allow a pound of sugar to each pint of juice; boil thirty minutes, and strain through a fine sieve.

Currant (Black) Jelly,—Boil ripe black currants with a little water till the fruit bursts, squeeze it through a jelly-bag, and set it again over the fire for twenty minutes; then add half a pound of sugar for each pound of juice, and boil the whole ten minutes longer.

Currant (Red) Jelly.—Make as directed for blackberry jelly.

Four-Fruit Jelly.—Take equal quantities of ripe strawberries, raspberries, currants and red cherries; all should be fully ripe, and the cherries must be stoned, taking care to preserve the juice that escapes in stoning and add it to the rest. Mix the fruit together, put it into a linen bag, and squeeze it thoroughly; when it has ceased to drip, measure the juice, and to every pint allow a pound and two ounces of the best loaf sugar, in large lumps. Mix the juice and sugar together; put them in a porcelain-lined preserving-kettle; and boil for half an hour, skimming frequently. Try the jelly by dipping out a spoonful, and holding it in the open air; if it congeals readily, it is sufficiently done. *This jelly is very fine.*

Gooseberry Jelly.—Take fine gooseberries, not too ripe; wash and drain them, and add a pint and a half of cold water to every quart of gooseberries. Place them over the fire, and boil till the whole becomes a jam, then strain it well through a jelly-bag. Make a rich syrup by mixing a pound of loaf sugar with a pint of the liquor and a little water in which the remains of the strained fruit have been boiled. Boil the syrup five minutes, add it to the juice, and boil them together for a quarter of an hour; then pour off.

Grape Jelly.—Select the ripest grapes in bunches, and spread them on clean straw; after two or three days, pick them from the stalks, and warm them in a stew-pan; then squeeze them thoroughly, and pass the juice through a sieve. Add a quarter of a pound of loaf sugar to each pound of juice, and boil half an hour; set to cool, and in twenty-four hours it will be a fine jelly, excellent for invalids.

Guava Jelly. (*See* GUAVA.)

Lemon Jelly.—Dissolve an ounce of isinglass in a pint of water; add a pound of loaf sugar, and the juice and rinds of two lemons; boil it ten minutes and strain it into the mould.

Marbled Jelly.—This pretty dish consists of various fragments united by a cement of a different color. It may be made either with the remains left after a supper-party, or various kinds of jelly and blanc-mange, or firm creams may be made on purpose; these may be colored yellow with saffron, turmeric, or egg-yolk, green with spinach-juice, and pink with cochineal or beet-root-juice. Blanc-mange has a very good effect for veining, but any other jelly will do. Arrange the colors in layers one above the other according to fancy.

Orange Jelly.—Grate the rinds of four sweet oranges and two lemons. Take the juice of three of each; add half a pound of sugar, and half a pint of water, and boil all together till it almost candies. Have ready a jelly made by boiling two ounces of isinglass in a pint and a half of water. Add this to the syrup, let it boil up once, and then strain it. Let it stand a while to settle before pouring it into the moulds.

Peach Jelly.—Pare, stone, and slice some ripe peaches and put them into a stone jar; crack one-third of the kernels and put them into the jar with the peaches. Set in a pan of boiling water, and stir frequently until the fruit is well broken; then strain, and to every pint of juice add the juice of a lemon and set on again to boil. Allow a pound of sugar to each pint of juice; heat it as directed for blackberry jelly, and add it after the juice has boiled twenty minutes. Let it come to a boil, and then remove instantly from the fire.

Quince Jelly.—Pare, core and slice the quinces, and for every five pounds of the fruit add half a pint of water; put peelings, cores, and all into a stone jar, set into a pan of water, and boil until quite soft. Strain through a fine sieve, and for every pint of juice allow a pound of sugar; boil almost twenty-five minutes, and then strain into the tumblers.

Rhubarb Jelly.—Wash the stalks well, and cut them into pieces an inch or so long; put them into a preserving-kettle with enough water to cover them and boil to a soft pulp; strain through a jelly-bag. To each pint of this juice add a pound of loaf sugar; boil again; skimming often, and when it jellies on the skimmer remove it from the fire, and put it into the jars.

Raspberry Jelly.—Make as directed for Blackberry jelly.

Raspberry and Currant Jelly.—Take two parts of red raspberries and one of red currants, and proceed as for other berry jellies. This is one of the nicest of jellies.

Rice Jelly.—Boil half a pound of rice and a small piece of cinnamon, in two quarts of water for an hour; pass it through a sieve, and when

cold it will be a firm jelly, which, when warmed in milk and sweetened, will be very nutritious. Add one pint of milk to the rice left in the sieve, and boil it for a short time, stirring continually; strain it, and it will resemble thick cream if eaten warm.

Sago Jelly.—Soak the sago about an hour in cold water, and wash it; then put a tablespoonful of it in a quart of water, and simmer till the sago is entirely dissolved, and the liquid resembles a thin jelly. Then sweeten, and add nutmeg, cinnamon, or lemon-peel, and red or white wine to taste.

Strawberry Jelly.—Make as directed for Blackberry jelly; but a little lemon-juice should be added to that of the fruit—say a tablespoonful to a quart.

Tapioca Jelly.—Wash the tapioca, soak it three hours in cold water, in which simmer it till dissolved, with a pinch of salt and a few bits of fresh lemon-peel; then sweeten, add red or white wine, and take out the peel before using.

Wine Jelly.—Soak one package of Coxe's gelatine in a pint of cold water for one hour; add 1½ pounds of sugar, the juice of two lemons and the grated peel of one, and an inch of stick cinnamon; pour over all three pints of boiling water, and stir until the gelatine is thoroughly dissolved. Add a pint of sherry or white wine; and strain through a thick flannel bag, without squeezing. This is excellent for invalids. *Cider Jelly* may be made in the same way, by using cider instead of wine.

JOHN DORY. (*See* DORY.)

JOHNNY CAKES.—I. Mix a quart of Indian meal with enough boiling water to make a very thick batter. Stir in two or three teaspoonfuls of salt, and mould the dough with the hands into small cakes; in order to mould them up it will be necessary to rub a good deal of flour on the hands to prevent their sticking. Fry them in nearly enough fat to cover them; when brown on the under side, they should be turned. It takes about twenty minutes to cook them. When cooked, split and butter them, and serve hot.

II. Mix a quart of Indian meal as before, with enough boiling water to make a stiff batter; add a teaspoonful of saleratus and a teaspoonful of salt dissolved in a little milk; then stir in 2 or 3 tablespoonfuls of flour with 2 teaspoonfuls of cream-tartar. Drop the batter by the large spoonful into a frying-pan containing just enough fat to prevent the cakes sticking to it, and fry as before.

JONQUIL.—This favorite Spring flowering-bulb should be cultivated in the same way as already described for Hyacinths. The bulbs, however, should be planted only three inches deep instead of four. The double varieties of jonquils are very fine, but are seldom so fragrant as the single.

JULEP (Mint.)—There are many varieties of mint juleps, and they may be made of claret, madeira, gin, brandy, etc.; brandy is generally considered best. In making, proceed as follows:—Strip the tender leaves of mint into a tumbler, and add to them as much brandy or wine as you wish to take, and an equal quantity of white sugar. Put some pounded ice into another tumbler; pour this on the mint and brandy, and continue to pour the mixture from one tumbler to the other until the whole is sufficiently impregnated with the flavor of the mint. Then as the ice melts, drink either through a reed or from the tumbler. This is perhaps the most delicious of all summer drinks. For Gin julep, *see* GIN.

JUMBLES.—*Take:*—Sugar, 1 lb; butter, ½ lb; eggs, 8; flour; rose-water, or essence of lemon.

Stir the sugar and butter together till they are of a light color; then add the eggs, beaten to a froth, and flour enough to make the mixture stiff enough to roll out. Roll the dough out in powdered sugar, about half an inch thick, cut it into strips about half an inch wide and four inches long, join the ends together so as to form rings, lay them on flat tins that have been buttered, and bake in a quick oven. They should be a light brown, but perfectly crisp.

Almond Jumbles.—*Take:*—Almonds, ¾ lb; blanched and chopped fine; sugar, 1 lb; flour, 1 lb; butter, ¼ lb; sour milk, 1 teacupful; eggs, 5; rose-water, 2 tablespoonfuls; soda, ½ teaspoonful dissolved in a tablespoonful of boiling water.

Stir the butter and sugar to a cream; add the yolks of the eggs beaten to a froth, the flour, the milk, the almonds, the soda, and the rose-water; lastly the whites of the eggs beaten to a stiff froth. Stir all together thoroughly, and drop by spoonfuls on buttered paper; bake in a quick oven.

Cocoanut Jumbles.—Make as above, using grated cocoanut instead of almonds, and adding a little salt.

K

KALE.—Green curled kale or Borecole is a fine table vegetable of which there are several varieties. It must be well frost-bitten before it is fit for use; after which the frost should be drawn out by placing it in a cool cellar or in cold water. The parts used are the tender tops or crown of the plant, with the side sprouts, which should be well-boiled, so as to be tender before being dressed and eaten. Cook and serve the same as cabbage. Green kale is in season as soon as the frost appears, and continues good nearly all winter. (*See* SEA-KALE.)

KALSOMINING.—The first requisite in kalsomining is to have the walls perfectly clean; if there be grease or lime on any part, it must be scraped off and made smooth; and all imperfections, such as cracks or nail holes, filled with a putty made with plaster of Paris or whiting, time being allowed for the putty to harden before laying on the kalsomine. Sometimes it may be found expedient to coat the walls with a thin sizing of glue before applying the kalsomine, and some painters prefer a coating of good oil paint to prevent dampness from striking out and discoloring the walls.

In preparing the kalsomine, mix ten pounds of zinc white, if for extra fine work, or the same quantity of common whiting if for ordinary work, to a thick cream with warm water; then add half a pound of dissolved glue, and stir all well together. If for side walls, more glue (half a pound) will have to be added to insure it from rubbing off. A common whitewash brush will answer to lay it on with, and it should be applied while warm, adding hot water, to thin it if found too thick to spread easily. It was the practice of painters until lately to lay kalsomine evenly, one way only, as in oil painting; but the better method is to pass the brush indiscriminately in every direction, leaving it in that state which seems to give it the most solid appearance.

As the charge for kalsomining, and in fact for all similar work, is out of all proportion to its actual cost, it may be useful to sum up here the expense in the way of material attending the kalsomining of a room twelve by fifteen feet:—

½ lb. glue at 25 cts per lb.	$0 12
10 lbs whiting at 3 cts "	0 30
½ lb glue, (extra for side walls),	0 12
Total	54

A whitewash brush will cost one dollar additional, but as the brush will be uninjured and can be used very frequently, it hardly enters into the actual cost of the work. Ten cents worth of blue, yellow, red, green, etc., in dry colors, will form any desired tint.

KEROSENE.—Kerosene oil is a product of the distillation of bituminous coal, and is also made from crude petroleum. It has superseded nearly all other oils for purposes of illumination mainly on account of its cheapness, and when of good quality produces a bright and beautiful light, inferior only to gas. In selecting kerosene, attention should be paid to two points: its safety and its light-giving qualities. Good kerosene should be clear in color, and free from all matters which can gum up the wick and thus interfere with free circulation and combustion. It should also be purified from all that portion which boils or evaporates at a low temperature; for it is the production of this vapor, and its mixture with atmospheric air, that gives rise to those terrible explosions that occur when a flame is brought near a can of poor oil. To test the oil in this respect, pour a small quantity into an iron spoon, and heat it over a lamp until it is moderately warm to the touch; if the oil produces a vapor which can be set on fire by means of a flame held a short distance above the surface of the liquid, it is bad. Safe oil poured into a cup or on the floor does not easily take fire when a flame is brought in contact with it. Poor oil will instantly ignite under the same circumstances, and hence the breaking of a lamp filled with poor oil, or the use of poor oil in any way about the house, is fraught with terrible peril of conflagration. Not only the safety but the light-giving qualities of kerosene are greatly increased by the removal of these volatile and dangerous components of the oil; and this is readily done by a process of refining which only slightly increases its cost. One of these "refined" oils should always be chosen, and the best of them is the Astral Oil.

Kerosene should be kept in a cool, dark place, and carefully excluded from the air. It would be superfluous, probably, to caution against using it for lighting fires and the like, since those who do such things must be fully aware that in doing so they are subjecting themselves and their property to the deadliest peril.

KERSEYMERE. (*See* CASSIMERE.)

KETCHUP. (*See* CATSUP.)

KETTLE.—Kettles are usually made of cast-iron, though not infrequently of copper or tin. (*See* COPPER-WARE, IRON-WARE, and TIN-WARE.) In boiling a kettle care must be taken to put on the lid *closely*, so as not to leave the smallest crevice. If the lid is in the least broken or bent, it is best to get a new one; otherwise the water is very likely to be smoked and will then communicate a disagreeable taste to whatever it is used in preparing.

To remove fur from the inside of a kettle, fill it with water, and add to it a drachm of sal-ammoniac; let it boil for an hour, and the *fur* or incrustation formed on the metal will be dissolved and can easily be removed.

KID.—The meat of the kid is sometimes but not often found in our markets, but it is considered inferior to lamb, and can scarcely be numbered among the edible meats in this country. (*See* GOAT'S FLESH.) Kid is prepared, dressed, and served in the same way as Lamb.

KIDNEYS.—These are obtained from cows, sheep, or pigs. The *calves' kidneys* are best of all, and are usually found in the loins of veal, but sometimes they are taken out and sold separately. *Lambs'* and *sheeps' kidneys* are very much alike, but the lambs' are considered most delicate. *Pigs' kidneys* are also best when taken from the young pig or shoat. No kidneys should be used for cooking purposes which are not perfectly fresh. If pigs' kidneys have any disagreeable smell they should be thrown away.

Broiled Kidneys.—Split the kidneys into four pieces, skewer them apart, cut away all the skinny or membranous portions, sprinkle

with salt, and broil over a good fire. When brown on both sides, serve.

Fried Kidneys.—I. Trim and cut the kidney into slices; season them with salt and pepper, and dredge them well with flour; fry them on both sides until they are nicely browned; then lift them out, empty the pan, and make gravy for them with a teaspoonful of butter, a dessertspoonful of flour, pepper and salt, and a teacupful of boiling water; shake them round, and give them a minute's simmering; add a little mushroom catsup, lemon-juice, or any sauce that will give a good flavor. Minced herbs are, to many tastes, an improvement to this dish, to which a small quantity of onion cut fine can be added, if it is liked.

II. Strip off the skin and remove the fat, and then slice the kidney rather thin; season it with salt, pepper, and grated nutmeg, and sprinkle over with plenty of minced parsley, or equal parts of parsley and eschalots, chopped very small. Fry the slices over a brisk fire, and, when nicely browned on both sides, stir amongst them a teaspoonful of flour, and pour in by degrees a teacupful of gravy and a wineglassful of white wine; bring the sauce to the point of boiling, add a morsel of butter and a tablespoonful of lemon-juice, and pour the whole into a hot dish, garnished with fried bread. This is a French receipt, and an excellent one.

Stewed Kidneys.—Cut the kidney in half, lengthwise, and soak it in strong salt water for twelve hours; parboil it till about half done; set it aside till cold, and then cut away all the tender meat, leaving the tendons and membranes unused; put these bits of meat into a stew-pan, with about two teacupfuls of boiling water, and boil till very tender; then add a tablespoonful of butter, season to taste with pepper and salt, thicken with a little flour, and boil about five minutes longer. Have ready a few slices of crisp toast, pour the stew over them on a dish, and serve at once, garnished with parsley.

KING-FISH. (*See* WHITING.)

KITCHEN.—In city houses the kitchens are nearly always on the basement floor, while in the country they are as generally either separate or an outlying portion of the main building. In either case the same principles of construction should be observed. A kitchen should always, if possible, be entirely above ground; and it should always be well-lighted and thoroughly ventilated. These points are of more importance than is generally supposed, since the contentment of the cook and the goodness of the cookery depend upon them in a very large measure. A whitewashed wall is best for a kitchen, as it is clean and neat, and can be so easily whitewashed afresh whenever it is soiled. The whitewash can be colored, if desired; this makes a prettier wall, but has the disadvantage that, whenever any place becomes soiled, a whitewasher must be called in to repair the mischief, whereas, the ordinary whitewash can be prepared and applied by any one. Both ceiling and walls should be whitewashed at least twice a year. Painted wood-work is not desirable in a kitchen; it soon looks dirty, unless washed very frequently with soap, and this soon wears the paint off in spots. The wood, left in its natural state, requires a great deal of hard scrubbing; but, if oiled and varnished, or simply oiled, will keep clean a long time, and can be easily and quickly wiped off with a little water.

If the flooring is smooth and evenly laid, the cleanest and least troublesome method of treating is to oil well two or three times a year. It does not soil easily then, and when soiled can be washed readily and without scrubbing. If it is not in proper condition for oiling, stain it with black walnut stain, made as follows: To one gallon of turpentine add a quarter of a pound of asphaltum and half a pound of common beeswax. If found too thin, add beeswax; if too light in color, add asphaltum, though this must be done with caution, as a very little will make a great difference in the shade, and the wood should not be black, but a rich, dark brown. This will probably have to be renewed every Spring and Fall, but it is not difficult to apply, and will cost less than fifty cents for each application. Carpets should never be used on a kitchen floor, except a rug here and there in Winter, and oil-cloth is both expensive and difficult to keep clean. If any carpet be used it should be *rag*, because it is thick and heavy. This should be tacked down only in front of doors and places where it is liable to trip any one up. Strips of zinc may be tacked around the hearth and in front of the sink, and are admirable arrangements to prevent dirt and wear.

Every kitchen should have a large sink, with a drain running under ground. This sink should be scalded out every day, and occasionally with hot lye; and care should be taken that no tea leaves or potato peels are thrown into it, as they soon obstruct the pipes.

For the furniture and utensils required in a kitchen, *see* FURNITURE.

KNIFE.—Table-knives are the only ones which claim our attention here, and, for suggestions as to the different kinds and qualities, and the materials of which they are made, *see* CARVING, and FORK. The best steel is the cheapest in the end, and will give most satisfaction. The finer kinds of knives have the blades plated with silver, and are very ornamental; but it must be recollected that these cannot be sharpened when they become blunt by use, as they soon do.

In washing knives the blades only should be dipped in hot water and wiped immediately, taking care that the handles are not wetted; they should then be cleaned on the knife-board, or with the patent cleaner, if there is one at hand. To preserve knives not in common use, the *blades* should either be rubbed over with mutton suet or they should be kept in a wooden box containing sifted quicklime, care being

taken that the blade only of the knives touch the lime.

A very simple knife-cleaner may be made of two boards, twenty inches long, six inches broad, and one inch thick, joined together, but not quite close, by a hinge; two pieces of buff or belt leather are stretched over the interior surfaces, and nailed on the exterior ones; and a handle assists in holding the apparatus steady. In using it, lay powdered Bath brick, or any similar dust, on the lower leather; shut the boards together, lay the left arm on the upper board, holding the handle; put the knife, well wiped from grease, between the leathers, and four or five rubs backwards, not sideways, will produce a beautiful polish on both sides. The shoulders and back may be polished on the leather turned over.

Or, cover a smooth board, free from knots, with thick buff leather, on which spread, about the thickness of a penny, the following paste: Emery, one part; crocus, three parts; mixed with lard or sweet oil. This composition not only gives a superior polish to knives, but improves their edges.

KOL-CANNON.—Mix, in about equal proportions, some smoothly mashed cold potatoes and some cabbage or greens of any kind, first boiled quite tender, pressed very dry, and chopped a little, if needful. Mash up the whole well together, add a seasoning of pepper and salt, a spoonful of butter, and a spoonful or two of cream or milk; put a raw onion in the middle of the mass, and stir it over a clear fire till it is very hot and sufficiently dry to be moulded and dished like dry hash. Take out the onion before the Kol-cannon is served.

In Ireland mashed parsnips and potatoes are mixed in the same way, and called *parsnip-cannon.*

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LABURNUM.—The common laburnum, or golden chain, is a very ornamental shrub, common in gardens, and well worthy of cultivation. It grows in any moderately rich soil, requires little attention when once planted, and is perfectly hardy. The English and Scotch laburnum are somewhat tender in the Northern States; they will, however, flower splendidly in a slightly sheltered location, and their golden chain of flowers is very beautiful.

The seeds of the laburnum, which it bears in profusion, are poisonous, and produce, when eaten, excessive vomiting, relaxation, and cramps. The treatment is to give an emetic of anything that may be at hand, while a dose of white vitriol is being sent for; this will soon remove them from the stomach. Afterwards the body must be supported with brandy and cordials.

LACE. (**To clean.**)—To clean *white lace edging*, cover a quart bottle with linen stitched smoothly to fit the shape; begin at the bottom and wind the lace round it, basting it fast at both edges to the linen; soap it well with fine soap, rinse by plunging up and down in a pail of clean water,—put it into a pot and boil it till white. Then set in the sun to dry; and, when dry, clip the basting threads, and unwind the lace. If it has been carefully basted on, it requires no ironing, and will look nearly as good as new.

To wash white lace, baste each piece on old muslin; soap it well and soak in soft water over night; work the soap out by squeezing it occasionally, dipping and squeezing it again. Change the water two or three times, repeating the dipping and squeezing; put it (again fresh soaped) into a saucepan of cold water to simmer for a quarter of an hour or so; boil it twice over if necessary, and if the color is still bad, bleach a little on the grass before finishing. Rinse it in plenty of hard water, adding a little blue; then dissolve twelve lumps of white sugar more or less according to the quality of the lace in a teacupful of hot-water, pour into a large basin and add a little blue; dip each piece of lace in separately, squeeze; shake out, and spread upon a clean cloth; roll them up for an hour more, then put them in a fresh cloth, to lie rolled up till nearly dry. Use a cold iron.

Fine lace covered with powdered French chalk or magnesia and so left for a week often comes out clean.

To clean black lace, squeeze it three or four times through a liquid made by dissolving a teaspoonful of spirits of wine, and a teaspoonful of borax, in half a teacupful of very soft water; then rinse in a cup of hot water in which a black kid glove has been boiled. Pull out the edges of the lace until nearly dry and press for two days in a heavy book.

LACHENALIA.—One of the Cape bulbs, very easy of culture, and making extremely pretty window plants. They should be grown as near the glass as possible. Plant in October, in pots filled with a rough, peaty, and sandy soil; they require very little water, but after starting into growth should never be allowed to become parched. The foliage of the lachenalia is prettily variegated with black; and the flowers, which are in bloom from January to February, are produced in upright spikes, and are pendulous, high-colored tubes. *L. pendula*, with red and yellow flowers, is the most common species. There are many species with pink, purple, red, yellow, and blue flowers; among the choicest of which are: *L. fragrans*, with flowers white and red; and *L. quadricolor*, with flowers yellow, red, and purple.

LACQUERING.—A thin varnish given to brass-work, such as to handles of locks, door-plates, etc., to prevent their tarnishing. Brass-work may be re-lacquered in the following manner: Put an ounce of turmeric, two drachms of arnotto, and two drachms of saffron, into a pint of alcohol; shake it occasionlly for a week, and then filter into a clean bottle; add three ounces of clean seed shellac, and shake the bottle now and then for a fortnight. In applying it, warm the metal first, and lay the lacquer over it evenly with a soft brush.

A lacquer to give tin, or silver-plated articles the appearance of brass, may be made thus: Melt, in separate vessels, two ounces of shellac and eight ounces of amber; mix them well together, and add half a pint of drying linseed oil. Dissolve in a pint bottle, two drachms of saffron in half a pint of oil of turpentine; strain this, and add to it two drachms each of gum-tragacanth and arnotto finely powdered. Mix both these compounds together and shake them well; apply as before. It is by this varnish that leather is made to appear as if *gilded*, after it has been covered with silver leaf.

LADY SLIPPER. (*See* BALSAM.)

LAGER BEER.—This term is properly applied only to those beers which are fermented in cool cellars by a slow process in which the yeast settles to the bottom of the vessels. In this country it is applied indiscriminately to the light kinds of beer which are prepared by the slow process of fermentation. Much of this beverage, however, is not genuine lager-beer, for it has not lain a sufficient length of time in the cellar to acquire that title; nor could it have been preserved in casks during the time required by lager-beer in ripening. It is more technically termed, and is known by the brewers as *Schenkbier*, or draught-beer. It contains less alcohol than the genuine lager, and less than the various kinds of ripened ales, and corresponds to what is known in this country as "present use ale," or the new ale commonly kept in the ale-houses. Lager is a light and pleasant summer beverage; but it has neither the nutritive nor the stimulating qualities that are generally claimed for it. One advantage is that it costs so little to manufacture that it is seldom adulterated.

LAMB.—The young sheep is usually known among butchers as "lamb," until it arrives at the age of twelve months, when it is termed *yearling*, though still in many cases dressed and sold as lamb. The *Spring lamb* is a luxury prized chiefly for its unseasonableness; its flesh, although delicate and tender, is quite insipid and much less nourishing than good mutton. Lamb is occasionally sold in our markets as early as March; after which it slowly increases in size and plentifulness, until in the months of June, July, and August, it is in full season and of fine quality. When it first appears, lamb is not sold in less quantity than a quarter, its weight being seldom above five or six pounds. As it increases in size the lamb rapidly increases in weight, and in June the quarters generally weigh from eight to twelve pounds each. Later in the season the quarters will weigh as much as twenty-five pounds each, but the animal is then cut up like mutton, and the same joints can be procured.

In butchering, the carcass of lamb is first split down the centre of the back and neck into two sides, which are quartered by leaving two or three ribs on the *hind-quarter*. When large enough, and it is desired by the purchaser to be cut or divided, the leg is first cut off and prepared for roasting or boiling, or is cut into chops. The *fore-quarter* of lamb is smaller than the same joint of mutton, and the bones are of a more reddish color. The fore-leg is broken off immediately above the joint of the foot, which connects with the white joint bone. This is generally considered the choicest part of the lamb on account of the delicacy of the ribs and breast when roasted. Removing the blade-bone greatly assists the carver. The *loin of lamb* is usually cut into chops, or cracked for roasting. Separated from the shoulders, the neck and breast broiled make a choice dish.

In choosing lamb, it must be borne in mind that this meat will not keep long after the animal is killed. When the fore-quarter is fresh the large vein in the neck is bluish in color; when it is becoming stale it is green. In the hind-quarter, if not recently killed, the fat of the kidney will have a slight smell, and the knuckle will have lost its firmness. Another test is to examine the fat on the back and then that on the kidneys, both of which should be white, hard, and of the same color.

Baked Lamb.—Either the fore-quarter or hind-quarter may be used for this. Put the joint in a baking-pan, the bottom of which is just covered with cold water; spread a little butter on it, and season with salt and pepper; cover it with a piece of buttered paper, and set the pan in a moderately quick oven; baste often till done. If the paper burns, put on another piece. Allow about ten minutes to the pound, and in order to ascertain when properly done run a small knife or skewer into the meat; it should enter easily. Serve with the gravy only, or with any sauce that may be preferred.

Boiled Lamb. — Lamb should never be boiled except in stews; it becomes tasteless and sodden on account of its immaturity, and if very young is positively unwholesome.

Chops (Lamb).—Prepare, cook, and serve as directed for mutton chops. They should be broiled, never fried, as they are already sufficiently oily.

Roast Lamb. — Either the fore or hind-quarter will answer for this; but the fore-quarter is generally esteemed choicest. The fire for roasting should be clear and brisk; put the meat on with a little water in the dripping-pan, and it must be carefully and plentifully basted from the time it becomes warm until it is ready to serve—first with salt and water, and afterwards with the gravy. Though it requires

quick roasting, it must never be placed sufficiently near the fire to endanger the fat, which is very liable to scorch or burn. Allow about ten minutes to the pound for a fore-quarter; eight minutes for a leg; and six for a shoulder. Lamb should always be well done. Serve with the sauce given below; or, skim the gravy well, thicken with brown flour, and serve with that.

Sauce for Lamb.—The mint for this sauce should be fresh and young. Strip the leaves from the stem, wash them carefully, and drain them on a sieve or dry them in a cloth; chop them very fine, put them into a sauce-tureen, and to three tablespoonfuls of the mint add two of pounded sugar; let them remain a short time well-mixed together, and then pour to them gradually six tablespoonfuls of vinegar.

Stewed Lamb.—**I.**—*Take:* Three or four pounds of lamb, cut it up into pieces an inch or two in length, crack the bones and remove all the fat; put the meat in a pot with enough cold water to cover it, and set where it will heat gradually. Cover it closely, and stew half an hour; then add four ounces of salt pork cut into strips, a chopped onion, and some pepper; cover again and stew an hour longer, or until the meat is very tender. Mix a little dough as for biscuits, cut into squares, and drop into the stew; boil ten minutes and season further by the addition of a little parsley and thyme; thicken with two tablespoonfuls of flour stirred in a teacup of cold milk. Boil up once and serve in a deep covered dish.

II. Choose a small plump leg of lamb, not much exceeding five pounds in weight; put it into a vessel nearly of its size, with a few trimmings or a bone or two of raw veal, if at hand; cover it with warm water, bring it slowly to a boil, clean off the scum with great care when it is first thrown to the surface, and when it has all been skimmed off, add a bunch of thyme and parsley, and two carrots of moderate size. Let the lamb *simmer* slowly, but without ceasing, for an hour and a quarter; serve it covered with rich white sauce, and send some of the sauce to table with it in a tureen.

LAMBREQUIN. (*See* CURTAINS.)

LAMPREY—usually called *lamprey-eels*—are taken in large numbers in the months of March, April, May and June. The flesh is dark, rather dry, and somewhat insipid in taste; and, though a favorite dish in England, is not much esteemed here. They are considered best in the months of May and June. Prepare as directed for EELS.

LAMPS.—The lamps in use not too simple to justify description, are treated under separate articles, except two brought to our notice since the articles were prepared about the others named in the cross-references below. The main purpose of this article is to explain some matters common to lamps in general.

The distance from the burning part of the wick to the surface of the oil should remain unchanged, so that equal quantities of oil may be drawn up at all times, and the reservoir should be so shaped and placed that its shadow will occasion the least inconvenience. If the wick is supplied from a reservoir below, it is obvious that just in proportion as that is exhausted, the distance from its surface to the flame is increased; the wick elevates less oil, and the light grows faint and dim. To remedy this, the reservoir is often made so as to have a large surface of oil that will fall but a little distance although a considerable amount be withdrawn. To avoid the objectionable shade thrown by such a large cistern close to the wick, the *astral* lamp had its reservoir constructed in the form of a narrow circular ring, which throws but a small shadow. The *sinumbra* lamp had this ring so shaped as to produce still less shade. A more modern device is a fountain of oil placed on one side higher than the wick, with a self-acting arrangement by which the reservoir is fed from it, and its height constantly maintained at the same point, as in the German student lamp, (*which see*). The *astral* and *sinumbra* lamps are now virtually out of use.

The *wick* of a lamp serves only to raise up the oil; the combustion of its own substance is so small as scarcely to deserve notice. The size of the wick, however, is important. To secure complete combustion, it is essential that the air shall have access to every part of the flame. If the wick be large, a great deal of carbon vapor remains unconsumed in the interior of the flame, or breaks out at the top as smoke, and the flame appears yellow or even brownish. The smaller the wick, the clearer and whiter will be the flame; yet a very small wick cannot give much light. It was first noticed by Dr. Franklin that two small wicks, placed close together, give more light than one equal in quantity to both; the air being admitted between them, there is more surface of flame than in one only. (*See Duplex Lamp* below.) Three wicks, for the same reason, give still more light; but they consume oil in proportion. It is rather difficult to keep several wicks always at the same height, and there is a good deal of trouble in adjusting and trimming them. A flat wick is found to obviate this inconvenience, and to give a much better and clearer light than a round one which consumes the same quantity of oil. These are consequently now much used. By far the best arrangement of the whole, however, is that invented by M. Argand, and known as the *Argand burner.* (*See Argand.*)

The *care of lamps* requires so much attention and discretion that it should only be entrusted to the most reliable servants, if to any. Lamps should be freshly filled, the chimneys cleaned every day, and the wicks trimmed smooth with a pair of sharp scissors. Take the lamp to pieces and clean it often. Half the light produced is often lost owing to the dirty state of the chimneys. Renew the wicks before they get too short; they should never be allowed to burn shorter than an inch and a half. The inside of oil-cans should be cleansed occasionally with soda dissolved in water (one tablespoonful of soda to a quart of water). Be

careful to drain them well, and not to let any gilding or bronze be injured by the soda coming in contact with it. Never leave a burning kerosene lamp turned down, as it will always smoke.

Argand Lamp. (*See* ARGAND.)

Carcel Lamp. (*See* CARCEL.)

Chimneys of glass can be effectually cleaned by kerosene or spirits, when water is ineffectual.

Duplex Lamp.—This is a lamp now made for burning kerosene, with two flat wicks side by side. (See remarks on preceding page.) The mechanical construction is too simple to justify illustration, but as these lamps are sometimes made in quite elegant form we annex a cut giving the exterior view.

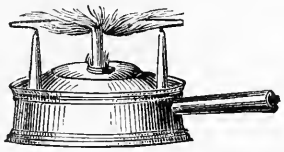
Globes. (*See* under GAS.)

Moderateur Lamp. (*See* CARCEL.)

Shades. (*See* under GAS.)

Spirit Lamp.—The ordinary forms are well known; the one here given is not yet widely introduced, but is an immense convenience at the table, in the nursery and sick room, and in travelling. It is generally known as the *Rachaud Lamp*. The inventor is M. Lang.

It burns alcohol vapor with which it supplies itself through a roll of wick contained in the small vertical central cylinder and reaching from the bottom of the lamp to near the top of the cylinder. The top of the cylinder is closed but near the top a circle of small holes is pierced. The part of the cylinder in and near the main reservoir is surrounded by a second wick projecting slightly above the cover of the main reservoir of the lamp. When this outside wick is lighted the cylinder is heated, and the alcohol, with which capillary attraction has saturated the inner wick, is rapidly vaporized and rushes out of the holes near the top of the cylinder with considerable force. This vapor becomes ignited from the flame below it, of the outside wick, and large horizontal jets of flame are so kept up while the supply of alcohol lasts. Water may be boiled by this flame with an astonishing saving of time and fuel.



Three vertical rods start from the periphery of the reservoir, and are bent inward horizontally, so as to support the vessels to be heated.

Student Lamp. (*See* GERMAN STUDENT LAMP.)

LARD.—The best lard is that made from the leaf-fat which adheres to the ribs and belly of the hog; lard made of this is called *leaf-lard*. As a general thing, however, the lard obtained in the stores is made of the fat cut from various parts of the hog—including both leaf-fat and meat-fat; this is cut into very small pieces, then boiled till quite rendered, and the melted fat having passed through a strainer into pots becomes lard when cool. Good lard should be white and solid, and without disagreeable smell.

Extensive adulterations are practised in lard by mixing *flour*, *water*, *starch*, *lime*, or *alum* with it, and in some cases *carbonate of soda* or *potash* and *salt*. In addition to these, veal and mutton fat are also mixed with it, in order to give inferior qualities the consistence which good lard ought to have. Water is easily detected by the sputtering made in melting. Flour and starch can only be detected by the microscope, excepting that on melting lard containing these substances, an opaque body is usually seen floating in it, and generally falling towards the bottom. The saline ingredients mentioned above require chemical tests to make them apparent.

To Make.—The best way to secure pure lard is to make it at home. For this purpose, if "leaf-lard" is desired, take the leaf-fat, wash it carefully and let it drain, cut it into bits, and put it into a tin kettle or stone jar, and set this in a pot of boiling water; stir occasionally until it is melted, allowing it only to *simmer* slowly; throw in a very little salt to settle the sediment; and while still hot, strain through a coarse cloth into jars. Good lard for common use can be made of the fatty portions of the hog lying next the skin. Cut these into slices, put them in a large pot, add a teaspoonful of water to prevent scorching at the bottom, and melt slowly, stirring every few minutes. Simmer until the meat is shrivelled and brown and

dry; remove the bits carefully with a perforated skimmer, add a little salt as before, and when the fat is clean strain it into jars. Great care is required in making lard to prevent scorching; for this reason it should simmer very gently, and should be stirred often—almost constantly at the last. Lard keeps better in small jars than in large ones. Cover the tops with bladders, and over these tie a cloth dipped in melted grease.

LARDING.—This consists in the introduction of thin and narrow pieces of ham or bacon into poultry and meats that are naturally somewhat dry and devoid of flavor. Veal, turkeys, chickens, and rabbits may all be larded with advantage, and almost any roast or stewed dish is improved by it. The *larding-needle*, with

Larding-needle.

which the process of larding is performed, is merely a short, thick needle with a spring opening or slit instead of an eye, so that a narrow slip of bacon may be introduced, just as a pen is inserted into a penholder. Charged with this larding, the needle is passed through a pinched-up portion of the flesh, and having inserted it so that its two ends project, the slit of the needle is opened and liberates its charge. These pieces of bacon are inserted in regular order, at intervals of about an inch, in the breast of a turkey, chicken, or in the substance of veal, etc.; after which the article is considered larded, and is ready for the fire.

LARK.—This is one of the small birds ranked as game. The *shore-lark* or *sky-lark*, is the species oftenest found in the market; it is generally very fat, and is considered excellent eating. It is in season throughout the winter months, but cannot always be obtained. The *brown lark* is not quite so plentiful as the preceding; it is in season during the months of March, April and May, when their flesh is said to be equal to the shore-lark. *Meadow-larks*, or *meadow-starlings*, are sometimes found in the market, and are shot in great numbers South and West. The flesh of a young fat bird is almost as good as that of the quail, but the bird itself is neither so large nor so plump. They are in the best condition during the fall months. Cook and serve as ORTOLAN.

LARKSPUR.—One of the finest of the hardy herbaceous plants, and desirable for every flower-garden. It is perennial, requiring but little attention and will grow luxuriantly in any good garden soil. It grows readily from seed, or from increase of the roots; and if the seed-pods are cut off, will continue in flower from July to November. All the attention they require is to loosen the earth around the roots each Spring and dig in a few spadefuls of manure. The plants are propagated by division of the root, which should be performed in early Spring, just as the plant starts into growth, or in the latter part of Summer, when they have done flowering. The shades of blue in the larkspur are unsurpassed by any flower of similar color.

The *Delphinium Formosum*, and *D. Hendersonii*, are beautiful varieties of the brightest blue color with a white centre. Other varieties are, *D. Alba*, pure white; *D. Belladonna*, sky blue *D. Chinensi Pumilum*, azure blue; and *D. Mons. Neuner*, pale blue.

LASTING.—A woollen fabric with a double warp, sometimes of two and sometimes of three threads; it is made of various patterns, plain, twilled, or figured. It is generally black in color, and is used chiefly for the tops of ladies' shoes. Width eighteen inches.

LATOUR. (*See* CLARET.)

LAUDANUM.—The ordinary tincture of opium. The ordinary dose for an adult is from 20 to 30 drops. (*See* OPIUM.)

LAUREL LEAVES.—The receipts in many cook-books direct the use of laurel leaves (cherry-laurel) as a seasoning or flavoring substance. In all such receipts substitute the bay leaf. The first is poisonous, containing prussic acid; the latter is simply aromatic, with a perfume similar to that of cinnamon. Laurel leaves should be banished from cookery, for though no perceptible evil effects may follow their use in small quantities, the consequences of an overdose, or of a mistake on part of the cook, may be serious.

LAUGHING GAS. (*See* NITROUS OXIDE.)

LAURESTINUS.—This plant, hardy in England, is with us a winter-blooming parlor ornament. It is easily cultivated, grows rapidly, and blows very freely. The flowers are small, white, and gathered into clusters, and are in bloom from February to May. The pots for growing the laurestinus should be large, and filled with a soil composed of four parts loam, and one part each of sand, leaf-mould, and manure. The plants should be freely watered. They should also be washed frequently, as dust collecting on the foliage injures the beauty and health of the plant. There are many varieties of the laurestinus, one of which, the snow ball (*Viburnum opulus*) is a hardy garden shrub, highly ornamental.

LAVENDER-WATER.—*Take*:—A pint of proof spirits of wine; essential oil of lavender, one ounce; essence of ambergris, two drachms. Put all into a quart bottle, and shake it up well daily.

LAW.—While there is the same danger in law as in medicine, that non-professional treatment may do more harm than good, fortunately the necessity for resorting to it is less frequent. Owing to the varying laws of different States, to go into the subject fully and without danger of misleading, would require a large volume. There are, however, a few universal rules that everybody should know as a

means of safety in estate, just as the principles of hygiene should be known as a means of safety in body. Some of these rules belong with the business forms elsewhere given under their respective titles of ACCOUNT OR BILL, CHECK, DRAFT, POWER OF ATTORNEY, PROMISSORY NOTE and RECEIPT, or under the law of master and servant, which is treated under SERVANTS. We have endeavored to group the others in this article.

Caveat Emptor (Let the purchaser take heed).—When the article sold is not at the time of sale in the possession of the vendor, the vendee buys at his peril, unless there be a covenant or warranty of title. But if the vendor at the time of sale has the article in his possession, and sells it as his own, and receives a fair price, he warrants the title; and in case the title prove defective, he is bound to make compensation to the vendee. After the completion of the sale by payment and delivery, the vendee may find that the article sold is not in quality and nature what he intended to buy. The general rule applicable here is, that it is the duty of the vendee at the time he entered into the contract to examine for himself and ascertain whether the article will answer the intended purpose, and to exercise his own judgment with regard to its quality. If he omitted to do this, he cannot rescind the contract and recover the price paid, unless the vendor was guilty of false and fraudulent representations material to the sale, by which the vendee was misled; or there was an express warranty by the vendor; or unless a warranty is implied from the nature and circumstances of the sale. When goods are sold by sample there is an implied warranty by the vendor that the quality of the bulk is equal to that of the sample. So, if one buys an article for a specific purpose, which is made known to the vendor, and the vendee relies upon the skill and judgment of the vendor to supply what is wanted, there is an implied warranty that the article will be fit for the purpose. And if an article is to be made to order, there is an implied warranty that is reasonably fit for the purpose for which it is ordinarily used. It is said that where provisions are sold by a trader for domestic use, there is an implied warranty that they are sound and wholesome. Good faith is required on the part of the vendor; and if the article sold have a secret defect, which the vendee by the strictest attention could not discover, but which is known to the vendor, it is his duty to disclose it.

Change. *See* (*Tender* below.)

Deed.—Any contract or agreement expressed in writing, under seal, and which has been delivered, is a deed; but the term is often used in a more restricted sense to denote a writing, sealed and delivered, by which lands or some interest therein is conveyed. A writing for the conveyance of lands, signed and sealed by the grantor, and placed in the hands of a third person, to be delivered to the grantee upon the happening of a certain event, is called an escrow. As a general rule the escrow takes effect at the time of delivery to the grantee, and until then the title to the estate remains in the grantor. The formalities necessary for the due execution of deeds of lands are prescribed by the statutes of the several States; and, as the assistance of a competent legal adviser should always be obtained, no forms are here given.

The statute of frauds provides, that no action shall be maintained upon any agreement for the sale of real estate, or any interest in or concerning it, (except leases for a short term, usually not to exceed one year,) unless such agreement or some memorandum thereof, be made in writing, and signed by the party to be charged therewith, or his agent.

In nearly all the United States, the wife is entitled to dower (an estate for life in one-third part of the husband's lands) in all the lands which the husband owned and possessed during his life; in which case, if the entire interest in the lands is intended to be conveyed to the grantee the wife should join in the deeds. In those States, however, where the wife is only entitled to dower in those lands which the husband owned and possessed at the time of his death, there is no occasion for her to join in a conveyance by the husband.

Erasures or interlineations in a deed, made by the grantee, subsequent to its execution and delivery, render it void; and the rule now seems to be, that when erasures or interlineations appear in a deed they are presumed to have been made after execution and delivery, unless the contrary be proved. It is, therefore, best when they are made before execution to note that fact upon the instrument itself before signing.

It is deemed advisable in this country to have every man's title to real estate appear on record, and provision is made in the several States for the recording of deeds by the county clerk or other proper officer. An unrecorded deed is good as between the grantor and the grantee, but third persons may acquire an interest to the prejudice of the grantee. A grantee should, therefore, upon the delivery to him of a deed, have it recorded immediately.

The destruction of a deed after delivery, although unrecorded, will not revest the title in the grantor. To do this a reconveyance is necessary.

An owner of lands should exercise caution in entering into a written agreement for a future sale of land, or any interest therein, and satisfy himself of the responsibility and good faith of the person with whom he deals, as otherwise he may find a cloud upon his title which may obstruct his selling to a third party, and cannot be removed without litigation.

Delivery of personal property.—As between vendor and vendee the property in the article sold passes to the vendee without delivery; but to give the vendee a title which will avail against third parties without notice, delivery is essential: as, if B

buys A's horse and pays the purchase money, but leaves him in A's possession, who sells and delivers him to C, and receives the purchase money, if C has no notice of the prior sale to B he can retain the horse. So, if the vendee allow the article sold to remain in the possession of the vendor, it is liable to be taken by legal process for the vendor's debts. The general rule upon this subject is, that if the vendee of personal property suffer the vendor to remain in possession, this is evidence of fraud as against the creditors of the vendor or a *bona fide* purchaser; and, unless there be a sufficient excuse shown to and approved by the court, that evidence is conclusive. In many States mortgages of personal property, or chattel mortgages as they are called, are authorized by statute. The mortgage must contain a specific description of the property mortgaged, and be recorded in the same manner as deeds of real estate. Where such mortgages are allowed, and the provisions of law regulating them are complied with, the mortgage is good, although the mortgagor retains possession. In all other cases the mortgagee should take possession, the rule being the same as in case of an absolute sale (*See sale of personal property.*)

Dower. (*See* under *Deed* above.)

Escrow. (*See* under *Deed* above.)

Grace. (*See* PROMISSORY NOTE).

Interest (for Money).—Interest, in the sense in which it is here considered, is the sum paid for the use of money or its equivalent. In most States the taking of more than a certain sum as interest is prohibited; in which case the taking of a larger sum constitutes the offence of usury. The rate fixed by law is not uniform throughout the United States. By recent legislation in some States, usury laws, so called, have been abolished, the parties being allowed to contract for any rate they choose. Owing to the diversity in the laws of the different States relating to this subject only a few general considerations will be given here.

To entitle a party to interest, it is not necessary in many cases that there should be an express contract to pay it. In general, the wrongful detention by one person of money due to another gives to the creditor a claim for interest; as, if goods are sold on credit, the debtor in case of non-payment is liable for interest from the time the credit expired. A promissory note made without interest, payable at a specific time, bears interest from maturity. If payable on demand, it bears interest from the time demand was made.

Compound interest, or interest upon interest, is in general not allowable. If a note was made payable five years after date, with interest annually, which the debtor should neglect to pay, and, after the maturity of the note, a suit was brought for principal and interest, only simple interest could be recovered. The creditor might, however, have brought an action for each year's interest as it accrued, in which case, the measure of damages would doubtless be the unpaid instalment of interest and interest thereon from the time it became payable. But if unpaid instalments of interest are allowed to run until the principal is due, they become merged with it, and a separate suit cannot be maintained therefor. (*See Tender* below.)

Legal Tender. (*See Tender* below.)

Limitations, Statute of.—It is a general rule that no action can be brought upon any account, debt, claim, negotiable note or contract not evidenced by a writing under seal, except within six years after the right of action shall accrue. The object of this rule is to prevent attempts to enforce doubtful or fraudulent claims after the evidence by which they could be defeated has been dissipated.

The six years are to be counted from the time the creditor might have brought his action. If goods are sold on credit, the six years begin from the time the credit expired. In case of a promissory note on time, when the note is due and payable. An acknowledgment or promise to pay the debt renews the liability of the debtor, and removes the protection of the statute. Formerly a verbal acknowledgment or promise was sufficient; but about fifty years ago a statute was passed in England, requiring it to be in writing, and similar statutes have been enacted in most of the United States. In a few States, a verbal acknowledgment or promise is still sufficient. A part payment of the debt, or a payment of interest due upon it, also renews the liability of the debtor. This is upon the ground that the part payment of a debt is, in effect, an acknowledgment of the residue, and a promise to pay it. If, therefore, at the time of payment the debtor denies any further liability, the protection of the statute is not removed. When a debt is renewed in either of the above modes, it is treated as giving a new cause of action to the creditor, and the six years begin to run again from the time of such renewal.

The statute also prohibits the bringing of an action to recover possession of real estate after a certain time, usually twenty years, although a shorter period is prescribed in some states.

Exception is made in favor of infants or persons under twenty-one years of age, married women, and other persons legally incapable when the right of action accrues. As to them, the statute begins to run from the time the disability ceases. When the time has once begun to run, however, it is not suspended by a disability that arises afterwards.

Payments, Appropriation of.—Where an indebtedness consists of several items accruing at different times, the debtor in making a partial payment may, at the time of making such payment, apply it as he sees fit. If the debtor make no application the creditor has a right to do so. If neither makes a specific application by an express act, the law implies an application of the payment to the items in

the order of their respective dates, commencing with that which accrued first. The importance of these rules would be illustrated in a case where the creditor held two demands, one secured and the other not. It might become of considerable consequence to which demand a payment was appropriated.

Mortgage.—The rules vary too much in different States to make good advice practicable here. (*See*, however, *Delivery* and *Payments*.)

Outlawry of Claims. (*See Limitations, Statute of*, above.)

Release.—A release is a written instrument, by which a right of the maker to sue another person is discharged, or by which such other person is released from some obligation or duty with respect to the maker. The following is the ordinary form of a general release :—

"Know all men by these Presents:

"That I, John Doe, of the city, county and "state of New York, in consideration of one "hundred (100) dollars to me paid by Richard "Roe, of said city of New York, do, for my-"self, my heirs, executors and administrators, "remise, release and forever discharge the "said Richard Roe, his heirs, executors and "administrators, of and from all actions, "debts, contracts, agreements and demands "whatsoever, which against the said Richard "Roe I ever had, now have, or which I, my "executors or administrators, hereafter can or "shall have, by reason of any matter, cause or "thing whatsoever, from any time hitherto to "the day of the date hereof.

"In witness whereof, I have hereunto set "my hand and seal, this first day of May, "A. D. 1876.

JOHN DOE, [L. S.]"

A release will be set aside when its execution was procured by fraud, or it was the result of accident or mistake.

Sale of Personal Property.—A sale is defined by Chancellor Kent to be "a contract for the transfer of property from one person to another for a valuable consideration; and three things are requisite to its validity, viz.: the thing sold, which is the object of the contract, the price, and the consent of the contracting parties." The seller is termed the vendor, and the purchaser the vendee.

If an article is exchanged for another the transaction is called a barter. If an article is voluntarily given to another without consideration, it is a gift.

Unless a contrary intention appears, it is presumed that a sale is to be completed at once—the article delivered and the price paid. The parties may, however, agree for a future delivery or a future payment.

The seventeenth section of the Statute of Frauds, so called, passed in the twenty-ninth year of Charles II., provides, that "no contract "for the sale of any goods, wares and merchan-"dize for the price of £10 sterling or upwards, "shall be allowed to be good except the buyer "shall accept part of the goods so sold, and ac-"tually receive the same, or give something in "earnest to bind the bargain, or in part payment, "or that some note or memorandum in writing "of the said bargain be made and signed by "the parties to be charged by such contract, or "their agents thereunto lawfully authorized." This section, with some variation as to the amount, has been generally reënacted in this country. It is, therefore, essential to a valid contract for the sale of goods for the price of fifty dollars or more (the limit in New York) that—

First. There should be some note or memorandum of the contract made in writing, signed by the parties to be charged thereby, or their agents; or—

Second. That the buyer shall accept and actually receive part of the goods; or—

Third. That the buyer shall give something in earnest to bind the bargain, or pay some part of the purchase money.

If the thing sold is not in existence at the time the contract is entered into, the sale is wholly void; as, if the furniture in a house is sold, and unknown to either party, it had been destroyed by fire. An article which a man has not in his possession but which he expects to obtain, as by purchasing in the market, cannot be the object of a present sale, although it may be the basis of a contract for a future sale.

No one can sell that to which he has himself no title. As if the article be stolen, the original owner may reclaim it, although the purchaser paid the thief full value, and had no knowledge of the circumstances under which the article was obtained. A good title may, however, be obtained to money, and also notes, checks and bills of exchange payable to bearer, which have been stolen, by an innocent third person who takes them *bona fide*, without knowledge that they have been stolen, and in the usual course of business. (*See Caveat Emptor* and *Delivery*.)

Sale of real property. (*See Deed.*)

Tender.—If a creditor for any reason refuses to receive the amount justly due him from his debtor, the latter may, at any time before suit is brought, make a tender of the sum due, and thereby stop interest and entitle himself to costs if a suit is subsequently brought. The tender should be of the exact sum due at the time, and no condition or qualification must be insisted upon to which the creditor can reasonably object.

A tender is vitiated by a demand for a receipt in *full*, and it is doubtful whether the debtor is entitled to demand a receipt for the sum tendered.

A tender should be made in lawful money.

No foreign gold or silver coins are a legal tender in the United States.

The gold coins of the United States are a tender in all payments at their nominal value, when not below the standard weight, etc. If

reduced below such standard, they are a legal tender at a valuation in proportion to their actual weight.

By the Act of Congress of Feb. 12, 1873, the silver coins of the United States were made a legal tender at their nominal value for any amount not exceeding five dollars in any one payment. This limit has recently been increased, and several bills are now pending before Congress relating to the subject.

The minor coins of the United States are a legal tender at their nominal value for any amount not exceeding twenty-five cents in any one payment.

United States notes (greenbacks) are a legal tender in payment of all debts, public and private, except duties on imports and interest on the public debt.

A tender made in other than lawful money is not thereby vitiated, if the creditor object to it only upon some other ground, as that the sum tendered is not sufficient.

Where several distinct debts are due from the debtor, as upon several promissory notes, a tender may be made of the amount due upon one.

While the exact sum due should be tendered, the offer of a larger sum will make a good tender unless coupled with a demand for change; in which case, if objected to upon that ground, the tender will be vitiated. If, however, the creditor object only upon some other ground, as that the amount is not sufficient, the demand for change does not vitiate.

To constitute a valid tender, the money must be actually produced and offered, unless there be an express or implied waiver thereof by the creditor.

As before stated, the object of a tender is to stop interest or damages and give the debtor a claim for costs in case a suit is afterwards brought. It follows, that it is not a discharge of the indebtedness, but rather an admission of it. It is, therefore, the duty of the debtor to be in readiness to pay the sum tendered upon demand, although it was refused by the creditor when first offered.

A tender should be made in the presence of witnesses, and it is well to make a memorandum of the circumstances attending it.

Warranty. (*See Caveat Emptor* above, and *Endorsement*, under PROMISSORY NOTE.)

Will.—A will, or testament, as it is sometimes called, is a declaration of a man's intention with regard to the disposition of his property after his death. The person making the will is called the testator, and those taking under it legatees or devisees.

A nuncupative will is a verbal declaration of a man's intentions with regard to the disposition of his property, made before witnesses. In many States, wills of this kind have been abolished altogether, and in others they are only good under peculiar circumstances, as in case of soldiers and sailors.

The making of a will is an important event and the best legal assistance at command, should always be secured. Wills unskilfully made are often the source of protracted litigation, and become a curse rather than a blessing to those whom the testator intended to serve.

To take effect, wills must be executed with the formalities required by law: and in this regard the laws of the several States are not uniform, some States require three witnesses, others only two, etc.

To show the necessity of attending to all the formalities required by law, it may be stated, that if a testator after the execution of his will adds another provision by an interlineation in his own handwriting, it has no effect whatever, unless made with the same formalities required for the will itself.

Any person of sound mind, not under twenty-one years of age, nor a married woman, is competent to make a will devising both real and personal estate. As to the capacity of persons under twenty-one years of age, and married women in this regard, the laws of the several States are not uniform.

A will takes effect at the death of the testator, and may be revoked by him at pleasure during his life. A subsequent will is a revocation of a prior one, if it is so expressed, or if a different disposition is made of the property. The burning, cancelling, tearing or obliterating a will by the testator, or by another person in his presence and by his direction, will also operate as a revocation. It is also a general rule, that marriage and the birth of a child subsequent to the execution of a will, when no provision is made for such contingency, operates as a revocation. If a single woman makes a will and then marries, the will is thereby revoked.

No person who is to take a beneficial interest under a will should be a subscribing witness, nor is it prudent for such a person to draft it.

While we advise strongly the obtaining of the best professional assistance in all cases where it is possible, nevertheless emergencies may arise where help cannot be had. For such cases, and such cases only, the following suggestions are given: Write out in clear and simple language the exact disposition of property desired. Call in three substantial and judicious persons, and let the testator sign and seal the will in their presence, telling them that it is his last will and testament, and requesting them to act as witnesses. Then let the witnesses, in the presence of the testator, and in the presence of each other, each sign the following form, which should be written underneath the signature of the testator, and on the same sheet of paper:—

"Signed, sealed, published and declared by "the testator as and for his last will and testa- "ment in our presence, who at his request, "and in his presence, and in the presence of "each other, have hereunto subscribed our "names as witnesses."

Following their names, the witnesses should write their places of residence. It is believed that a will executed in the above described

manner would take effect in nearly if not quite all the States.

LAWN.—A linen fabric, thinner and more transparent than ordinary linen and resembling cambric. The thread for it is made as round as possible, and is not pressed so much as for calicoes. The finest lawn is of French manufacture. The Irish is next to the French, and there are also Scotch and American lawns. Lawn has the advantage that it will take and hold very delicate colors and shades of colors. It comes in pieces a yard wide, and should be shrunk before cutting.

LAXATIVES.—Remedies which gently open the bowels, so that they are inclined to be loose, but no more. It is highly desirable that in all cases the medicines of the least power in this respect should be first employed when it is necessary to open the bowels artificially, and more powerful purgatives used only when these have failed. Sometimes, if the food has been too concentrated, that is, if there has not been a fair amount of indigestible matter in it, the bowels are apt to become confined; in such cases, the use of brown bread instead of white bread will often suffice. Figs and prunes especially are excellent laxatives. Manna, tamarinds, and cassia are still better. But the most convenient for use are castor-oil, flour of sulphur, and magnesia, or its carbonate.

LEAD.—Lead is not a proper metal to be used in any vessel for receiving food, it is so readily acted on by the vegetable and mineral acids, and the salts thus produced are highly prejudicial to health, and even fatal to life itself. Water-tanks should never be lined with lead, nor should the gutters of houses from which the rain-water is used be made of it. Water that has been standing in the pipes should not be used until the pipes have been some time in use.

LEAK (In lead pipe).—If you cannot turn off the water and cannot wait for the plumber, put some flat metal object, such as an axe or hatchet blade behind the pipe, and hammer the pipe flat against it. This, of course, can be done at any place between the source and the leak, and does not necessitate waiting to tear away any impediment that may surround the leak or working in an inconvenient place. If the leak is up stairs at a part where the water stops running when water is turned on down stairs simply turn the water on at some faucet down stairs till the plumber comes. (*See* DRAINAGE and WATER.)

LEAVEN. (*See* YEAST.)

LEDUM.—A species of low-growing evergreens, making very pretty miniature plants for garden culture. They are perfectly hardy, and require no attention after starting, further than digging round the roots in the Spring and working in a few spadefuls of manure. In planting, dig a hole about two feet in diameter, fill in with loam, and set the plant carefully in the centre, treading the soil closely around it so that it may be firmly established. The ledum blooms in June, throwing out a multitude of small white flowers.

The varieties are: *L. Augustifolium, luxifolium, intermedium, latifolium, plaustre, procumbens, and thymofolium.*

LEECHES (How to use.)—Very often it is found almost impossible to get leeches to bite; they will either refuse to bite at all, or will fasten anywhere but on the desired spot. This is because they are not managed rightly. A leech partakes, to some extent, of the nature of a fish—that is, it lives in water,—and therefore, instead of holding them in a warm hand or a dry towel, act in this way: First, wash the place perfectly clean, then put the leeches into a wine-glass and fill it with water; put a piece of paper over it, turn the glass upside down on the place where you want them to fix, and draw the paper away; the leeches being now in their native element, will settle instantly, thereby saving a great amount of vexation and loss of time. As soon as they have taken hold, place a towel round the glass to soak up the water, and remove it. In this way you get them exactly where you wish, either all on one spot or distributed over a larger space, by putting on only one or two at a time. If you require one on a very particular spot, for instance, close to the eye, and have not a proper leech-glass, put its tail first into a small, narrow phial filled with water. Where they have to be used inside the mouth, nostrils, etc., it is better to pass a needleful of thread through the tail to hold by. It will not prevent them biting. If one should be swallowed, drink a little salt and water, which is poisonous to them.

Leeches are always expensive, but with a little care they need not be destroyed. When they come off do not dip them into salt; put them into a large jar of water, with an inch or two of turf or garden soil; change the water every day for the first week, then once a week will be sufficient; in this way they will clear themselves and recover. Any dead ones must be removed, or they will spoil the water and destroy the others.

LEEK.—This is a common plant of the onion tribe; it is sometimes called *flag-onion*, from the large, flag-like leaves which it throws up from its small, fine roots. Leeks are cultivated in all respects like the onion, and have the advantage that they stand the severest winter. In the markets they are generally found tied in bunches, or one or two tied up with a small bunch of parsley, being a quantity sufficient for a soup or stew. The whole plant is used in soups and stews. Notwithstanding its unpleasant odor, it is very wholesome, but requires to be well boiled, that it may not taint the breath. The young leeks appear in August, and can be found throughout the winter.

Boiled Leeks.—Trim off the coarse leaves from some young leeks, cut them into equal lengths, tie them up in small bunches, and boil them twenty to twenty-five minutes in plenty of water which has been previously salted and

skimmed. Serve them on toast, and send melted butter to table with them.

LEG (Broken.) (*See* FRACTURES.)

LEMON.—The lemon is the most useful of all the foreign fruits. It is scarcely an article of mere luxury, but is almost essential for culinary and many other purposes. The juice consists chiefly of *citric acid*, which, besides its agreeable flavor, is particularly cooling and grateful. It is also a powerful antiscorbutic, and is frequently administered as a medicine. The outward rind or peel of the lemon contains a highly odoriferous essential oil, and on that account is a valuable and agreeable stomachic, and is used for flavoring a variety of dishes; it is warm, aromatic, and slightly bitter; it is also made into an excellent sweetmeat when cleaned of the pulp and preserved with sugar, well known by the name of *candied lemon-peel.* Lemons can almost always be obtained. Fresh ones arrive from the West Indies in the Winter and from the Mediterranean in the Spring. The best are those with thin rinds and rather small.

LEMONADE.—*Take :*–Sugar (granulated) ½ lb; lemon juice, (free from seeds) 1 gill; water, 1 qt.

Grate the rind of two lemons, and leave it in the water for an hour or two; or, if wanted immediately steep it in a little of the water; in either case strain the water before using it. Mix the three ingredients; add a large piece of ice and serve. The lemons should be well rolled before squeezing and the peel not put in unless the lemonade is to be drunk immediately.

Concentrated Lemonade. — *Take :* – Essence of lemon, 1 drachm; citric acid, 1½ oz; loaf sugar, 2½ lbs; water, 1 pt.

To make the syrup, put the sugar into the water when cold, and let it boil gradually; then pour it hot on the acids. Keep this in bottles. To make the beverage, put a tablespoonful of the syrup into a tumbler of water.

Milk Lemonade.—Dissolve six ounces of loaf sugar in a pint of boiling water, and mix with them a gill of lemon-juice and the same quantity of sherry; then add three gills of cold milk, stir the whole well together, and pass it through a jelly-bag till clear. This is delicious.

Portable Lemonade.—Rasp, with a quarter of a pound of sugar, the rind of a fine, juicy lemon, reduce it to powder, and pour on it the strained juice of the fruit. Press the mixture into a jar, and, when wanted for use, dissolve a tablespoonful of it in a glass of water. It will keep a considerable time. If too sweet, a very small portion of citric acid may be added when it is taken.

LEMONS, Salt of.—This is an old-fashioned preparation, used for taking iron-mould out of linen; and in the printed directions sold with it, it is recommended for flavoring punch and apple puddings instead of *lemon-juice.* Now, this so-called salt of lemons is not prepared from lemons at all—it is composed of cream of tartar and oxalic acid, or salt of sorrel. Both the latter are poisonous and the quantity of salt of lemons recommended to flavor half a pint of punch or an apple pudding may produce serious effects. *Never* use it for flavoring anything that is to pass into the stomach.

LEMON VERBENA.—A half-hardy shrub, brought originally from Chili. It is desirable chiefly from the delicious fragrance of its leaves. The flowers are small, whitish, and of little beauty. As a Winter plant it is of no value, as it needs a season of rest, which must be given in a cellar free from frost. The best treatment is to plant it out in the open garden in the Spring, where it will attain a vigorous growth. In the fall, before the first frost, remove the plant, with a ball of earth attached to the roots, to the cellar. When Spring comes, trim the plant into a neat shape and replant it. If grown in pots, the proper soil is two parts loam, two parts leaf-mould, with a little sand mixed in. Give plenty of water while the plants are growing, but withhold it entirely during the Winter.

The lemon Verbena is often called the Aloysia, and the only species is *A. citriodora.*

LETTUCE.—Lettuce may be considered as a cooling Summer vegetable, and useful rather as correcting and diluting animal food than as containing much nutriment itself. There are two principal varieties: the *Cabbage* and the *Cos* lettuce. The first comes earliest in the season; the leaves are roundish and the head flat and close to the ground. The Cos lettuce is more upright, and the head is of an oblong form. When very young, the cabbage lettuce is preferred, but when mature the Cos has the finer flavor, and is much employed for salads. The cabbage lettuces (such as Tennis Ball, and Black-seeded Butter) are always the best to the time of running to seed. The only advantage of the Cos is that it stands heat better and is slower in running to seed.

The *Boston Tennis Ball*, and the *Black-seeded Butter* are the best varieties at all seasons save in Summer. The *Early Curled Simpson* is good for Spring and early Summer use. The *Large Curled Indian* is better for later use; it does not run to seed so quickly as other kinds, and bears the sun better. The *Green Paris Cos* is one of the best of the ordinary Cos varieties. The hard lettuce raised in the open air generally appears in the market in May, but is most abundant in June and July and continues throughout the year, being very largely raised under glass throughout the Winter and early Spring.

In Salad.—Lettuce for salad should be handled very carefully, in order not to wilt the leaves while cleaning it. When the head of the lettuce is hard, it is not necessary to wash it at all, as when the outer leaves are taken off, the rest is perfectly clean. Never use the knife, but break the leaves; put them into a salad-dish, and keep them fresh with water until the time comes to eat them. Then season with salt, pepper, vinegar, and oil (mustard may be added if liked), in proportions to suit the taste. The salad may be decorated when

it is put on the table with the blossoms and petals of the rose (any kind), pink, sage, nasturtium, periwinkle, lady's slipper, marsh-mallow, or wild chicory; these are not removed, but are cut up and eaten with the lettuce. In a regular dinner, lettuce should be served immediately after the roast.

Stewed Lettuce.—Strip off the outer leaves and cut away its stalks; wash the remaining leaves very carefully, and throw them into water with a little salt in it. Boil them twenty to thirty minutes, or until quite tender, then lift them out and press the water thoroughly from them; chop them a little, and heat them in a clean sauce-pan with a seasoning of pepper and salt, and a small slice of butter; then add a little flour and stir them well; add next about a teacupful of broth or gravy, boil them quickly until they are tolerably dry, and stir in a little pale vinegar or lemon juice. Serve as hot as possible.

LEUCORRHŒA. [*See* WHITES, under MENSTRUATION.]

LEVERET. (*See* RABBIT.)

LIBRARY.—Every home should contain a collection of books, however small; and they should be accumulated on some definite plan, however limited. The privilege of using a public library is generally valuable; but some books must be owned, and be constantly within reach, or no real satisfaction can be had from them. Of this character are cyclopædias, histories, standard poets, and discursive essays. Ordinary novels, satires, and other ephemeral books may be drawn from the circulating library, finished up in an evening or two, and returned.

There are innumerable families who never dream of buying any book but school-books and Christmas gifts. Every one who can afford anything at all beyond the necessaries of life should set aside a definite yearly sum for books, and should form the habit of frequently dropping into a book-store to see what there may be that would interest him. An excellent way to cultivate a habit of reading in a child is to give him, for his own, every book of your selection which he will read through. And living among good books at home is as important as going to school.

We disclaim any intention, in this article, of instructing learned or "bookish" people; but we hope to throw out a few hints which will be valuable to the vast number who may welcome guidance regarding what to read.

Any one who can look forward to spending within a year or two over, say, $150 in books, will find it well to consult "Putnam's Best Reading" (15th edition). It contains much valuable information, though there is room for dissent from some of its critical estimates.

In the matter of subscription books, some people buy any one that is brought to the door, if the agent is persistent enough; others refuse utterly to look at one. As Andrew Fairservice said of the Campbells, "There's baith gude and bad" o' subscription books, like other books. Examine the subscription book, and test it, as you would any other article; even tell the agent to call again, and meantime seek advice. Never buy a book solely because of a great name on the title-page. One or two of our most famous authors have of late sold their names to books which they did not write, and which they should be ashamed of if they had written. It is a common trick in subscription books to spread out the matter by means of large type, wide spaces between the lines, and thick, pulpy paper; so that you pay four or five dollars for what should have been put into a dollar-and-a-half book.

Always get good paper and print if you can; the latter is economical because it saves the eyes, and both will make the book worth re-binding some day. But so long as you are obliged to refrain from buying any book that you would like, never indulge in expensive bindings. Dictionaries and cyclopædias should have strong leather bindings; but for all other books the ordinary cloth is good enough. Do not bind up sets of magazines. The binding of each volume would pay for a new book; any valuable series of articles is pretty sure to be collected in a volume by itself; and not one in a hundred of those who imagine they will re-read their monthlies ever does so. Send your old magazines to the hospitals and the missionaries, and save the shelf-room and the binding price for fresher books.

The bottom book in every library must be a dictionary. But it is by no means necessary to get an unabridged; the octavo size will answer every ordinary purpose, and being easier to handle will be consulted much oftener. Yet the quarto editions have, in addition to the dictionary proper, much matter which tends to obviate the need of other books of reference. There is now no important difference between Webster and Worcester.

An American who can have but one cyclopædia should buy one prepared in America. The chief of these is the American (16 vols., $80). Johnson's ranks next (4 vols., $43); and there will soon be a smaller one, confined to the requirements of the average reader, and omitting the things which scholars alone can understand, issued by Henry Holt & Co., for $10. A cyclopædia is equivalent to a large number of books of reference.

Next get an atlas. One of the better sort of school atlases answers all general purposes.

Then a history of your native land. There is but one short history of the United States, for grown folks, that has the approval of scholars. This is Doyle's ($1.40), edited by Freeman, the English historian. Of the longer histories, the choice is between Bancroft (new ed., 6 vols., $13.50) and Bryant's, still (1877) incomplete. For an outline of the world's history, Freeman's General Sketch ($1.50) is incomparably the best. Green's Short History of the English People ($1.75) is not only the best short book on the subject, but one of the best books ever written on any subject. Bryce's Holy Roman Empire

($3), a work of the very first excellence, is virtually a general history of Europe from the beginning of the Christian era.

For an analysis and summary of the literature of our native tongue Taine's is confessedly the best (3 vols., $7.50; abridged, $2.50).

Very early in your collection should come a popular physiology: Dalton's ($1.50), Huxley and Youmans's ($1.75), Flint's ($6); a natural history: Hooker's ($1.50), Wood's abridged ($1.50), Milner's ($8); and a botany: Gray's ($1.30 to $3.50), Koehler's ($3).

Every house where English is spoken should contain a Shakespeare (50 cts. to $5,000). Add to this, Dana's Household Book of Poetry, ($3 to $6).

Let us recapitulate:

Dictionary.....	$5.00 to $12.00	English Literature.....	$2.50 to $7.50
Cyclopædia....	10.00 " 80.00		
Atlas.....	1.50 " 25.00	Physiology	1.50 " 6.00
U. S. History...	1.40 " 20.00	Natural History.	1.50 " 2.00
General History,	1.50 " 1.50	Botany...	1.30 " 3.50
English History,	1.75 " 1.75	Shakespeare	.50 " 30.00
Holy Roman Empire.....	3.00 " 3.00	Household Book of Poetry.....	3.00 " 6.00
			$34.45 $198.25

Here we have the essentials of a library at a price varying from a little over $30 to about $200.

We now proceed to books the choice of which will be determined by individual tastes; and for the use of the reader who wishes to expand his library we add lists of the best books in various departments. Regarding prices, please observe what is said in the "Hints" introductory to this volume. Standard works of fiction and poetry exist in so many editions that we have not attempted to give their prices.

Reference.

Men of the Time, $6. *Smith*, Dict'y of Antiquities, $2.50. *Cruden*, Concordance to Bible, $1.50 to $2.75. *Smith*, Dict'y of Bible, $4. *Goodholme*, Domestic Cyclopædia, $5. *Gasc*, French Dict'y, $1.50 and $4. *Whitney*, German Dict'y, $2.50. *Dodd*, Dict'y of Manufactures, Mining, and Mechanics, $2. *Ure*, Dict'y of Arts, Manufactures, and Mines, $15. *Bartlett*, Familiar Quotations, $3. *Schem*, Statistics of the World, 50 cts.

General Literature.

Botta, Handbook of Universal Literature. *Taine*, English Literature, condensed, $2.50; 3 vols., $7.50. *White*, Classical Literature, $2.50. *Gostwick and Harrison*, German Literature, $2.50. *Van Laun*, French Literature, $7.50. *Ticknor*, Spanish Literature, $10.

Religion and Philosophy.

Robertson, Sermons, $2. *Hardwick*, Christ and other Masters, $3. *Cazelle*, Outlines of Evolution Philosophy, $2. *Wright*, Philosophical Discussions, $3.50. *Fiske*, Cosmic Philosophy, $6. *Lewes*, History of Philosophy (English ed.) *Bain*, Mind and Body, $1.50. *Spencer*, Synthetic Philosophy, 6 vols., $15. *Leckey*, History of Rationalism, $4. *Farrar*, History of Free Thought (orthodox), $2.

History and Politics.

Ancient—*Herodotus* (Rawlinson's), $10; Bohn's ed., $1.75. *Smith*, Student's Anc. Hist., $2. Greece—*Grote*, $18; *Cox*, $2.50; *Smith's* Student's, $2. Rome—*Mommsen*, $8; *Gibbon*, $6 (Student's ed., $2); *Arnold*, $3. Middle Ages—*Hallam*, $5.25 (condensed, $2.50). England—*Hume*, $7.50 (Student's ed., $2). *Froude*, $15. *Macaulay*, $3 to $16. Hume, Froude, and Macaulay connect with each other. For a short history, get Green's, or Freeman's Thompson, $1. Germany—*Sime*, $1, also in *Bryce*, Holy Roman Empire, $3. *Bayard Taylor*, $2. *Freeman's*, $1. France—*Guizot* (now publishing). *Smith*, Student's, $2. [Freeman's Historical Course, by various authors, edited by the great historian, is an excellent collection of manuals, at low prices. It now (March, 1877) includes the editor's General Sketch, and histories of the United States, England, Scotland, Germany, and Italy.] Politics—*Mulford*, The Nation, $3. *De Tocquevile*, Democracy in America, $5. *Mill*, On Liberty, $2.50; Political Economy, $2.50 to $4.

Art.

Taine, Lectures, $5; Italy, $5. *Clement*, Handbook, $3.25; Legendary Art, $3.25. *Blanc*, Grammar of Painting, $6.50. *Kugler*, Hand-book of Painting, 4 vols., $21. *Mrs. Jameson's* works, $15 to $42. *Ruskin*, Modern Painters, $18 to $60; Lectures, $1.50.

Travels, Geography, etc.

Africa—*Jones's* Summary, $5. Alps—*Whymper's* Scrambles, $2.50. Arabia—*Palgrave*, $2.50. Arctic Regions—*Hayes*, *Kane*, *Markham*. Asia—*Pumpelly's* Across America and Asia, $2.50. *Taylor's* India, China, and Japan, $1.50. Brazil—*Agassiz*, $5. *Bates*, $2.50. *Orton*, $3. California—*Nordhoff*, $2.50. Canada—*Thoreau*, $2. China—*Williams's* Middle Kingdom, $4. *Taylor*, as above. Egypt, Arabia, and the Holy Land—*Stephens*, $3. *Prime*, $2. *Curtis*, Nile Notes, $1.50. The Sea—*Dana*, Two Years before the Mast, $1.50. India—*Murray*, $2.25. Italy—*Howells*, $2. *Taine*, $5. Japan—*Pumpelly*, as above. Norway—*Dufferin*, Yacht Voyage, $1.50. Russia—*Wallace*, $4. Scandinavia—*Taylor*, Northern Travel, $1.50. Siam—*Vincent*, Land of the White Elephant, $3.50. Siberia—*Pumpelly*, $2.50. *Kennan*, Tent Life, $2. Spain—*Hare's* Wanderings, $3. Sweden—*Anderson*, $1.75. Switzerland—*Jones*, $1.75. Turkey—*Gautier*, $2. West Indies—*Kingsley*, $1.50.

Science.

Astronomy—*Newcomb* (in press). *Mitchell*, $1.75. Biology—*Spencer*, $5. Botany—*Gray*, $1.30 or $3.50. *Koehler*, $3. Chemistry—*Cooke*, Chemical Philosophy, $2.50. *Johnston*, Chemistry of Common Life, $3. Cosmology—*Hæckel*, $5. Geography—*Johnston*, Dict'y, $12. *Steinwehr's* School Series. Geology—*Dana's* Books, $1.50 to $5. Health—*Fothergill's* Maintenance of, $2. *Jacobi*, Infant Diet. 75 c., Mineralogy—*Dana's* Manual, $2. Natural History—*Milner*, The Gallery of Nature, $8. *Wood's* abridged, $1.50. Physics—*Ganot*, ed. by Peck, $1.75. Physical Geography—*Marsh*, Man and Nature, $3. Physiology—*Dalton's*, abridged, $1.50. *Flint's*, $6. Psychology—*Spencer*, $5. *Bain*, Mind and Body, $1.50. Spectroscopy—*Lockyer*, $1.25. Zoology—*Packard* (in press). *Agassiz and Gould*, $1.50. *Tenney*, $2.

Fiction.

If your means are limited, do not think that you must get complete sets of books. Buy only masterpieces. Owning and being familiar with these, you can afford to gallop through most of the authors' others with copies from the circulating library. For light reading in variety, and to afford a wide choice of selections for reading to a company, get *Knight's* Half Hours with the Best Authors (4 or 6 vols.), or Little Classics (8 or 16 vols.) The latter includes 3 vols. of poetry. We give the names, *in Italic type*, of very good writers first, and then of other good ones, with here and there the name of a representative work in ordinary type.

Scott, Ivanhoe, Rob Roy, Kenilworth. *Cooper*, Last of the Mohicans, Pioneer, Spy. *Dickens*, David Copperfield, Pickwick, Our Mutual Friend. *Thackeray*, Pendennis, Vanity Fair, Henry Esmond. *Bulwer*, Last Days of Pompeii, Rienzi, What will He do with It? *George Eliot*, Adam Bede, Silas Marner, Daniel Deronda. *Hawthorne*, Scarlet Letter, Marble Faun, Twice-told Tales. *Irving*, Knickerbocker, Sketch Book. *Goldsmith*, Vicar of Wakefield. *Auerbach*, On the Heights, Village Stories.

About, *Miss Aguilar*, *Miss Alcott*, *Mrs. Alexander*, *Andersen*, Improvisatore, Arabian Nights, *Miss Austen*, *Black*, Princess of Thule. *Blackmore*, Lorna Doone. *Miss Bronte*, Jane Eyre. *Bunyan*, Pilgrim's Progress. *Cervantes*, Don Quixote. *Cherbuliez*, Count Kostia. *Mrs. Charles*, Schonberg Cotta Family. *Miss Roberts*, Noblesse Oblige. *Wilkie Collins*, Woman in White. *Mrs. Craik*, John Halifax. *Curtis*, Potiphar Papers. *De Foe*, Robinson Crusoe. *Disraeli*, Coningsby, Lothair. *Droz*, Around a Spring. *Dumas*, *Miss Edgeworth*, *Mrs. Edwards*, *Erckmann-Chatrian*, *Feuillet*, *Fielding*, *Fouqué*, Undine, Sintram, Aslauga's Knight. *Mrs. Gaskell*, *Goethe*, Wilhelm Meister. *Hardy*, Far from the Madding Crowd. *Bret Harte*, *Howells*, Foregone Conclusion. *Hughes*, Tom Brown. *Hugo*, Les Miserables. *H. James*, *Jun.*, The American. *Mrs. Jenkin*, Who Breaks—Pays. *Miss Kavanagh*, *Kennedy*, Horse-Shoe Robinson. *Kimball*, *Kingsley*, Hypatia. *Lawrence*, *Le Sage*, Gil Blas. *Lever*, *MacDonald*, *Miss Manning*, Mary Powell. *Marlitt*, *Marryat*, Midshipman Easy. *Mayo*, Kaloolah. *Mitchell*, Reveries of a Bachelor. *Miss Mitford*, Our Village. *Mrs. Oliphant*, Chronicles of Carlingford, 6 vols. *Mrs. Parr*, *Roe*, *Miss Porter*, Scottish Chiefs. *Miss Poynter*, My Little Lady. *Charles Reade*, Peg Woffington, White Lies. *Reuter*, In the Year 13. *Richardson*, Clarissa Harlowe, condensed. *Richter*, Titan. *Robinson*, *Ruffini*, Dr. Antonio. *George Sand*, *Miss Sewell*, *Miss Sheppard*, Charles Auchester. *Simms*, *Smedley*, Frank Fairleigh. *Smollett*, Humphry Clinker. *Mrs. Spofford*, Amber Gods. *Mme. de Stael*, Corinne. *Sterne*, Tristram Shandy. *Mrs. Stowe*, *Sue*, Mysteries of Paris. *Tautphoeus*, *Bayard Taylor*, *Anthony Trollope*, *Turgenieff*, *Jules Verne*, *Walford*, Mr. Smith. *Ware*, Zenobia. *Misses Warner*, Qeechy. *Warren*, Ten Thousand a Year. *Mrs. Whitney*, *Miss Yonge*.

Poetry.

The standard poets are issued in numerous editions. One

of the most compact is Appletons' Works of the British Poets, revised ed., brought down to date (3 vols., 8vo, $15). The best collections of short poems, both British and American, are *Dana's* Household Book of Poetry, *Bryant's* Library of Poetry and Song (new ed.), *Kendrick's* Poetical Favorites, *Beeton's* Great Book of Poetry, *Whittier's* Three Centuries of Song, and *Saunders's* Sacred Poets.

The poets most desirable to have in separate volumes are the following: British—Shakespeare, Byron, Burns, Tennyson, Shelley, Moore, Mrs. Browning, Robert Browning (any volume except Sordello), Wordsworth, and Keats. American—Longfellow, Whittier, Lowell, Holmes, Stedman.

In humorous poetry *Aytoun*, Bon Gaultier Ballads. *Barham*, Ingoldsby Legends. *Calverley*, Fly Leaves. *Gilbert*, Bab Ballads. *Harte*, Poems. *Hood*, Poems. *Lowell*, Biglow Papers. *Saxe*, Poems. *Smith*, Rejected Addresses. *Jones*, Vers de Societé.

MISCELLANEOUS.

Smiles's works, lives of men, principally self-made, eminent in industry and invention, 8 vols., $1.50 each, can be had separately. *Carlyle*, Anthology, selections from his writings, $2.50. *Milton*, Anthology, from his prose writings, $2.50. Book of Golden Deeds, $1.25. *Boswell's* Life of Johnson, best edition for practical use, condensation by Jones, $2.50. *Plutarch's* Lives, handiest edition by Clough, Boston, 1 vol., $4. Modern British Essayists—*Macaulay*, *Carlyle*, *Allison*, *Jeffrey*, *Sydney Smith*, *Mackintosh*, *Wilson*, *Talfourd*, and *Stephen*, 8 vols., $2 each. *Arnold's* Essays in Criticism, $2. *Mill's* Dissertations and Discussions, 5 vols., and Autobiography, 1 vol., $2.50 each. *Lamb*, Essays of Elia, $1.75. *Lowell*, 4 vols. of essays, $2 each. *Spencer* (*Herbert*), 3 vols. of essays, $2 to $2.50 each; and, On Education, $1.25. *Ruskin's* True and Beautiful, $1.25.

LICHENS.—Lichens form a remarkable class of plants that live in the most barren situations in the most northern parts of the world, growing even on bare rocks and under circumstances where nature refuses any description of corn. They have no roots, but adhere by a kind of claws, and are nourished by absorption from the atmosphere. The *Lichen Islandicus* is the "Iceland Moss" of commerce, and is so named from existing in vast abundance on the northern coast of Iceland, where no other vegetable is to be seen. Notwithstanding its mode of growth, it is an extremely nutritious substance, and with the Icelanders constitutes a very important article of food, and is prepared in a variety of ways. It is thought to have some tonic power, and to have other qualities which commend it, especially to convalescents; and for this reason it enters to some extent into cookery throughout the world. It should be made into a blancmange and eaten with milk and sugar.

LIEBIG'S EXTRACT OF MEAT.—By rigid analysis and very careful experiments this extract has been degraded from a very high position in the scale of nutritive substances to a point where it can scarcely be claimed for it that it is a food at all. Professor Liebig, himself, acknowledged shortly before his death that "it is not nutriment in the ordinary sense;" and Dr. Edward Smith says, in his book on *Foods:* "What is necessary to render this extract as valuable as the meat itself, for the purposes of nutrition, is to restore the substances which were rejected in the process of making, and those have been shown to be almost equivalent to the whole meat. There is but little left in the extract to nourish the body, and the elements which it really possesses are salts, which may be obtained otherwise at an infinitely smaller cost, and the flavor of meat, which disguises the real poverty of the substance." At the same time "it is a valuable addition to other foods, since it yields an agreeable flavor, and when prepared with hot water and properly flavored, gives a degree of exhilaration which may be useful to the feeble, and is as useful to the healthy as tea and coffee." Its proper position in dietetics is somewhat more than that of a meat-flavorer, but all that is required for nutrition should be added to it. Thus, in the preparation of ordinary soup and beef-tea, the extract may be added to increase the flavor; or it may be mixed with white of egg, gelatine, bread, and other cooked farinaceous substances. If, however, it be relied upon as a principal article of food for the sick, it will prove a broken reed, except to those extremely feeble persons who can take very little food, and are favorably influenced by slight causes.

To Make.—The extract as sold in the shops is rather expensive, and by the following receipt (which is Professor Liebig's own) it can be made at home with little trouble and at a slight cost:—*Take:*—A pound of good lean beef (rumpsteak is best for the purpose), from which all the skin and fat that can possibly be separated from it has been cut away. Chop it up small like sausage-meat; then mix it thoroughly with an exact pint of cold water, and place it near the fire so that it will heat *very slowly;* give it an occasional stir. It may stand two or three hours before it is allowed to simmer, and then will require at the utmost but fifteen minutes of gentle boiling. Salt should be added when the boiling first commences, and for invalids this, in general, is the only seasoning required. When the extract is thus far prepared it may be poured from the meat into a bowl, and allowed to stand until any particles of fat it may show on the surface can be skimmed off entirely, and the sediment has subsided and left the soup quite clear; then pour off gently, heat in a sauce-pan, and serve at once.

To mingle vegetable diet in its best form with this extract, boil down the kind of vegetable desired, sliced or cut up small, in a very moderate quantity of water, until its juices are well drawn out; then strain off the liquid from it by slight pressure, and when it has become cold, pour it on the chopped meat, as directed above, *instead of water.* Several different kinds of vegetables can be mixed together and cooked in this way; the water must boil before they are added to it.

LIGATURE.—A thread or cord tied tightly round a severed artery to stop the bleeding. Stout silk or pack-thread is best for the purpose and it should be tied around the end nearest the heart. It should be employed only when pressure and cold have failed to arrest the hemorrhage, and when surgical advice cannot be had at once. (*See* BLEEDING.)

LIGHTNING, Stroke of.—If a person be struck by lightning there is hope of resuscitation unless the body is scorched and blackened. Throw pailfuls of cold water on the head and body, apply strong mustard poultices to the

stomach, and rub the whole body briskly with flannel cloths. Try inflation of the lungs as directed in the case of the apparently drowned. Do not desist from rubbing when the patient exhibits signs of life, but keep on until the circulation is thoroughly restored. As soon as he can swallow, give a cup of coffee or some other stimulant.

In thunder-storms, the doors and windows should be closed, and all currents of air through the room stopped as far as possible. The safest position in a room is the centre; a feather-bed placed here will add to its security.

LIGHTNING-ROD.—Lightning-rods should be sunk in the earth at least six feet at the bottom, and the tops should be well pointed. Each rod will then afford certain protection to a circle around it *whose diameter equals the height of the rod above the highest chimney;* but it protects no farther than this extent. As usually placed, lightning-rods are a very slight protection to a building, especially if it be in an elevated and exposed situation. The best material for a lightning-rod is copper, which should be tipped with some bright polished metal; the glass holders, which are supposed to act as "insulators," are not considered by Professor Henry to be of much importance, and they seriously increase the cost.

LILAC.—There are about twenty varieties of the lilac, all of which are pretty and flourish in any garden soil under circumstances in which other shrubs would dwindle and die. The common lilac is the largest of the species and one of the most beautiful of our spring-flowering ornamental shrubs. The white variety is less common than the purple, and is not so sickishly sweet. The Persian and Chinese lilacs are smaller and better adapted for a small garden. The former is a small tree of graceful habit, and its flowers are of a lighter lilac color. The latter is especially desirable; the flowers are much darker than the other varieties, and its foliage is of a dark, glossy green, very rich. All these shrubs are perfectly hardy, and are usually grown without any care; yet if pruned and manured their beauty will be much increased.

LILY.—The lily is a large family of ornamental bulbs, most of which are hardy, and indispensable in every flower garden. The plants will grow in any garden soil, but a little attention will be repaid by greater luxuriance and more abundant bloom. The proper soil is a compost of one part loam, one part peat, one part sand, and one part leaf mould. Dig a hole about two feet deep, and fill in with the compost. The bulbs should be planted from three to five inches deep, according to size; autumn is the best time for planting. The soil should be frequently enriched, as the lily is a gross feeder, and will bear a large amount of manure, showing the effect in the increased size of stem and leaves and greater abundance of blossoms. During the winter the bulbs should be protected by a covering of coarse manure which may be dug in in the Spring.

The most desirable species are:—*L. candidum*, one of the oldest garden flowers, of great beauty and fragrance, and too well known to need description; there is a pretty variety with striped leaves, *L. perigrumilum*, is somewhat similar to the last but is botanically distinct. *L. bulbiferum* is the common orange lily; *L. Canadense* is one of the finest of the native variety; it has light orange and yellow drooping flowers, and throws up a stalk, sometimes five feet in height, having as many as twenty flowers. *L. Philadelphium* is commonly called the Blackberry Lily; it has deep red flowers, spotted with black. *L. Monadelphum* is sometimes called the Circassian Lily, from its native country; it has drooping, yellow-spotted flowers. *L. Martagon* is a very ornamental variety, with white and purple flowers; the soil should be rather sandy. *L. Chalcedonicum* is the Scarlet *Martagon*, one of the most highly-colored species. *L. Superbum* is the finest native species; flowers drooping, orange reddish, with numerous spots.

The *Japan Lilies* are, perhaps, the finest of the family, and are as hardy and easy of cultivation as the native species. The treatment is the same, except that the soil must not be made too rich with manure, as it tends to rot the bulbs. *L. Longiflorum* is a very beautiful species; flowers pure white, very long, and fragrant. It blooms in July, and requires a slight protection during the winter. *L. Eximium* is another lovely variety resembling *L. longiflorum*, but the flowers are still larger and their color is of a satin whiteness. *L. Japonicum* is a variety with large, white, bell-shaped flowers, and very desirable for either parlor or out-door culture.

The *Lily of the Valley* grows from large roots, which partake of the nature of tubers. It requires no care, will bloom year after year, in the same bed, and is perfectly hardy, requiring no protection in the coldest winter. There is no bulb that flourishes so perfectly under neglect, and no flower more perfect in form and fragrance. It will grow anywhere, but flourishes best in sandy out-of-the-way corners, where the soil is moist and rich. Plant in the late Autumn. It flowers in May and produces red berries in September.

LIME.—A small variety of lemon, more acid and cooling than the ordinary. Most of the citric acid of commerce is prepared from it. The green fruit is excellent for preserving, but is seldom found here. As a substitute for lemons its flavor is not agreeable to everybody.

Lime Juice is an antiseptic in scurvy; dose from one to two tablespoonfuls, with sugar, two or three times a day.

LIME.—A mineral used in mortar, in whitewashing, and as a manure, disinfectant, etc. In its original form it is called quick-lime, and is highly caustic. Before using it is slaked; that is, caused to go to pieces by adding water and leaving it in the open air. It is slaked when more water can be added without causing it to

smoke. Slaked lime can be had at gas-works, or where building is being carried on.

LIME-WATER.—Cover the bottom of a large bottle two or three inches deep with slaked lime. Fill up with clear water. It will not become too strong. After well shaking, and allowing it to settle, it will be ready for use. The bottle shown in the cut is very convenient. By blowing through the glass tube *a*, the water is forced through *b*, without disturbing the lime remaining in the bottom. Refill with water until the lime disappears.

LINEN.—In choosing linen, examine the threads, and select those which are even and close. A raw linen with uneven threads does not wear well. Also choose that which is perfectly white; if linen is not white at first it will never become so afterwards. Fine linens answer better than coarse ones, provided they are not unsuitable for the purpose for which they are destined. The wide linens are not thought so strong and well made as those of narrow width, but the latter will not cut to the same advantage as the wider ones. Much that is called linen in the shops is half cotton, and does not wear so well as the cotton alone; cheap linens are usually of this kind.

To discover which are all linen take a sample home, wash it and ravel it. If this be good the rest of the lot will probably be so. If it is not convenient to do this, draw a thread each way, and if both appear equally strong, it is probably all linen. Linen comes of various widths, from three-quarters of a yard to two and a half yards. It should be put into clean water and boiled, and ironed, before it is cut.

LING.—The ling is in season from November to March, but is seldom very plentiful in the markets. Usual weight about six pounds. Prepare, cook, and serve same as cod.

LINIMENT.—A term applied to an oily or other stimulating application for external use. *Camphorated oil*, an excellent antispasmodic liniment, to be used in obstinate rheumatism, etc., is made by rubbing an ounce of camphor with two ounces of Florence oil in a mortar till the camphor is entirely dissolved.

Volatile Liniment.—Take of Florence oil an ounce, and spirits of hartshorn half an ounce; shake them well together. This liniment made with equal parts of the oil and hartshorn will be more effective when the skin of the patient can stand it. In inflammatory quinsy, moisten a flannel cloth in this liniment and apply it to the throat, renewing every four or five hours; it rarely fails to afford relief. It is also excellent for inflammation or tension of any kind.

White Liniment.—Take of olive oil, one pint; spermaceti, three ounces; white wax, one ounce. Melt them together, stirring all the time. This is good for burns, scalds, or any excoriated surface.

LINSEED.—The seeds of the flax-plant. They contain a good deal of oil which may be readily obtained by expression; the amount depends upon the method adopted, and varies from eighteen to twenty-seven per cent. *Linseed oil* is especially remarkable for drying rapidly when applied to the surface of any body exposed to the air, and thus forming a hard transparent varnish. This property of drying quickly is much increased by previously boiling the oil, either alone or with some preparation of lead.

The cake left after the expression of the oil is known as *oil-cake* and forms an excellent food for cattle. When powdered, it is commonly sold as *linseed-meal*, which is much used for poultices and for other purposes. The linseed-meal, however, directed to be used in medicine, is merely the linseed powdered; hence, it contains the oil which is not present in ordinary meal.

Linseed-tea is made by putting a quarter of an ounce of linseed in a quart of boiling water. Steep two hours, and then strain.

LINSEY-WOOLSEY. — A cheap fabric made of linen for warp, and wool for woof, generally one blue and the other white, or mixed with red. It was more used formerly than now, but is still very serviceable stuff for children's common dresses in winter. Shrink it in hot water before cutting.

LIPS, Chapped. (*See* CHAPPED-HANDS.)

LIQUEURS.—These are intermediate between common spirits and the foreign sweet distilled spirit, mixed with certain flavoring matters, such as pine apple, peach kernels, etc. Below are given descriptions of the principal ones, with recipes for such as can be conveniently made at home.

Some not given here can occasionally be obtained from a few special dealers, but the list is believed to contain not only all that are "standard," but about all that the best dealers think it worth while to keep regularly in stock.

Liqueurs are taken after coffee, frequently mixed together, and sometimes added to brandy. One small glass of liqueur is sufficiently agreeable, but a larger quantity is cloying, and frequently disturbs digestion. The habit of drinking liqueurs during the day, which is not uncommon in France, especially among women, is excessively injurious, as the spirit used in their manufacture is usually of inferior quality.

All liqueurs improve vastly with age, and they are not usually good for several months after their manufacture.

Anisette.—This is composed of sweetened spirit flavored with aniseed and coriander. Bordeaux is famous for the manufacture of this liqueur, which is very popular in France, the best being made by Marie Brissart.

Benedictine.—Made by a community of Benedictine monks from fragrant herbs. The recipe is unknown. It is believed to promote

digestion. It comes in odd-looking squat black bottles that set off ornamental glass quite effectively.

Black Currant Liqueur.—The skins only of the black currants should be used; the pulp should be squeezed out from the currants, one by one, between the finger and thumb. Steep a pint of the skins in a quart of rectified spirit for a fortnight in a warm place; then strain the liqueur from the skins, and add to it a pound and a half of sugar.

Creme de Girofle.—Add forty drops of oil of cloves to a quart of spirits of wine and a quart of syrup, with a little red coloring matter. This liqueur is said to be beneficial to singers suffering under relaxation of the throat.

Creme de Noyeau.—*Take:*-Soft water, 2 quarts; loaf sugar, 2 lbs; brandy or rum, 1 gal; milk, 1½ pts; lemons, peel of 5; bitter almonds, ½ lb.

Boil the sugar in the water, and add the brandy or rum; then add the milk (boiled), the lemon peel, and the bitter almonds (blanched and bruised). Let the ingredients stand together five days, stirring well each day; then filter through very fine linen, and bottle it. It may be drunk in a month, but improves by keeping.

Creme de Thé is made in France, flavored with tea, and put up in bottles covered with gay-colored silk, on which are pasted paper pictures of Chinese scenes. The effect is quite ornamental to the dinner-table.

Creme de Vanille.—Spirit and syrup flavored and colored with the tincture and pod of vanilla.

Chartreuse.—This liqueur, of which there are two varieties, the white and the green, was originally prepared from a secret recipe by the monks of Chartreuse, in France. In 1809 its manufacture by the monks was prohibited by the Pope, and the liqueurs now sold under the name of Chartreuse are imitations of the original. The flavor is aromatic, and the liqueur has done good service in many cases of dyspepsia.

Curaçoa.—This, which is one of the most popular of the liqueurs, is made by macerating orange-peel with a little cinnamon and a few cloves in sweetened brandy. Two varieties exist in commerce, the white and the red, the latter being simply colored. For directions for making at home, *see* CURACOA.

Eau de Vie de Dantzic.—One quart of spirits of wine, twelve drops of oil of aniseed, six drops of oil of cinnamon, three drops of oil of roses, eight drops of oil of citron. Mix the above with a quart of syrup, filter, mix with the liqueur some fine bits of gold leaf, and bottle.

Kirschwasser.—This is a spirituous liqueur, made of black cherries, bruised and fermented. the stones of the cherries are bruised with the fruit, and used to give additional flavor. The fermented liquor is afterwards distilled.

Kuemmel.—This is a favorite Russian liqueur. It consists of sweetened spirit flavored with cumin and caraway seeds.

Maraschino comes in wicker-covered bottles. To make at home, *Take:*-Seville oranges, rinds of 12; lemons, peel of 5; sugar-candy, 3 lbs; gin, 1 gall.

Steep all the ingredients together for four days and nights, stirring well each day; filter it clear, and bottle it.

II. *Take:*-English gin, 1 qt; bitter almonds, 2 oz.; white sugar-candy, 6 oz.

Mix the ingredients and let them stand a fortnight; then strain it, and it will be ready for use in another fortnight.

Noyeau.—I. *Take:*-Bitter almonds, blanched and pounded, 2 lbs; brandy, 1 gall; white sugar-candy, 2 lbs; mace, ½ oz; one grated nutmeg.

Mix together thoroughly; stir up well every day for twelve days, and then leave it for six weeks, when it may be bottled. It must be kept at least five months before it is ready for use.

II. *Take:*-Sweet almonds, ¼ lb; bitter almonds, ¼ lb; loaf sugar, 1 lb; English gin, 1 qt.

Blanch the almonds and cut them small before adding them, with the sugar, to the gin. Keep them in a warm place; stir up frequently during a fortnight; then strain and filter into bottles.

Orange Liqueur. *Take:*-Brandy, 1 qt; lump sugar, 5 lbs; vanilla, ¼ of a stick; one orange.

Put the brandy into a wide-mouthed glass jar; add the sugar (reduced to powder), and the vanilla; stir till the sugar is all melted. Then put in one fine, smooth, unspotted orange, *whole*, cover the jar closely, and set it aside in a warm place. This liqueur should stand two or three months, so as to be well impregnated with the perfume of the orange.

Raspberry Liqueur.—Allow three pints of raspberries to a quart of spirit, and let them stand a fortnight in a warm place; then strain the liqueur, and add to it a pound and a half of loaf sugar.

Ratafia.—*Take:*-Peach and apricot kernels, 2 oz; brandy, 1 qt; white sugar-candy, 1 lb; cold water, 1 teacupful.

Blanch the kernels, bruise them, and put them into a bottle; pour on the brandy, and let them stand a month; then strain it off; add the sugar, dissolved in a cup of cold water; filter, and bottle for use. The leaves of peaches and nectarines, plucked in the spring and distilled, are an excellent substitute for ratafia in puddings.

LIVER.—The liver of the calf is better than any other, not even excepting goose liver, or *paté de fois*. *Lamb's liver* is also better flavored, more tender, and less dry than that of the sheep. In choosing liver, select that which presents a clear, bright, yellowish-red color, though that which is of a clear, dark color is good; yielding easily under the pressure of the finger is a sure sign of tenderness. Those which present dark, "sedgy" streaks, sandy spots, and abscesses, are unwholesome, and, in fact, unfit to be eaten.

Baked Liver.—Lard the liver with fat pork, and put into an iron pan, with a pint of water

or veal stock. Bake it three-quarters of an hour, basting it frequently. Have ready some macaroni, well boiled in milk and water. Dish the liver, and lay the macaroni around it. Add to the gravy a tablespoonful of butter, a little flour, and pepper, salt, and sage; boil it up once, and turn it over the dish.

Fried Liver (with Bacon).—Cut the liver into slices about a quarter of an inch thick, season it with salt and pepper, and fry it to a crisp brown with some breakfast bacon cut into thin slices. Serve with the gravy alone, or thicken the gravy with a very little browned flour. Help a piece of the bacon with each piece of liver.

Roast Liver.—Take the whole or part of a liver, and either lard it on the surface, or with large strips of highly-seasoned bacon in the inside (*see* LARDING); or, should either of these modes be objected to, merely wrap it in a well-buttered paper, and roast it before a brisk fire from an hour to an hour and a quarter, keeping it constantly basted. Serve with a sauce of some piquancy, in addition to some good gravy. As an economical mode, some small bits of the liver may be trimmed off, floured, and lightly fried with a sliced onion, then stewed down for gravy in three-quarters of a pint of water which has been poured into the pan, with the addition of a small bunch of herbs, a few pepper-corns, salt, and a little lemon-juice.

Stewed Liver.—I. From three to four pounds of liver will be sufficient for a dish of moderate size. First lard it quite through with bacon rolled in a seasoning of spice and of savory herbs very finely minced; then lay it into a stew-pan or sauce-pan just fitted to its size, and pour in about half a pint of broth or gravy; heat it very gently, and throw in, when it begins to simmer, a sliced carrot, a small onion cut in two, a small bunch of parsley, and a blade of mace; stew the liver as gently as possible over a slow fire from two hours and a half to three hours; thicken the gravy with a dessertspoonful of browned flour; add a couple of wineglassfuls of white wine, and a little spice, if needed, and serve it very hot, after having taken out the herbs and vegetables.

The liver may be stewed without being larded. The wine can be altogether omitted, or a wineglassful of port, mixed with a little lemon-juice, may take the place of the sherry.

II. Parboil the liver, cut it into small pieces, and stew in gravy or broth until done. Thicken with brown flour, and season with salt and pepper, and, if liked, some sweet herbs.

LIVERWORT. (*See* HEPATICA.)

LOBSTER.—Lobsters are generally plentiful in the markets throughout the year, except during the months of December, January, and February. They are better, however, in some months than in others—that is, the female lobster is generally preferred through the summer months, especially in June and July, and the male during the winter months. The latter is distinguished from the female not only by the absence of eggs under the tail, but by the longer and narrower back, running quite to the tail and including the fan or fins. The female contains the coral. If the lobster is stale, the tail hangs limp; while, if fresh, it is retained close to the belly, and if drawn down, will spring back with some force as soon as released. When the eggs of the female are large and quite brown, the lobster will be found exhausted, watery, and poor. Lobsters ranging from four pounds in weight are most delicate. The whole of the lobster is good to eat, except the shell and the craw, or stomach which lies between the eyes.

The *blue-back* lobsters are a very fine variety. The shell is quite thin, and they are in season during May and June. Their average weight is from two to four pounds. They are frequently found in the markets already cooked.

Boiled Lobster.—Put five ounces of salt in a gallon of boiling water; tie the claws of the lobster together, if the fish merchant has not already skewered them, and throw it into the water; boil from fifteen to twenty minutes, if of moderate size; thirty to forty minutes, if large, and an hour, if *very* large. When done, lift it out, and lay face downward on a sieve to dry.

Before a lobster is sent to table, take off the large claws, hold each of them firmly, with the edge upward, and with a quick blow with a heavy knife, crash the shell without disfiguring the fish. Split the tail open with a very sharp knife, and dish the lobster in the manner

Dressed Lobster.

shown in the engraving, either with or without a napkin under it. When the soft part of the body is required to mix with the dressing, take it out before it is served, and add it to the sauce intended for it. It is customary to dress the salad before serving, as few persons care to prepare their own salad.

Croquettes of Lobster.—Cut the meat of a cold boiled lobster into small, neat dice; season with cayenne, white pepper, and salt. Have one half pint of stiffly reduced béchamêl sauce; add to it the yolks of 3 eggs, and 1 blade of powdered mace; then add the lobster, stir until scalding; turn on a well-oiled dish, and when firm by cooling form them as desired. Bread-crumb, and fry in plenty of lard made hot for the purpose.

Curry of Lobster.—Extract the meat from a boiled lobster; lay it in a sauce-pan with gravy and cream at discretion; then add a tablespoonful of butter and two teaspoonfuls of

curry-powder, (if not powerful, three,) and simmer for an hour, adding a pinch of cayenne and salt. Half a wineglassful of sherry or Madeira will add to the aroma, but is not essential.

Devilled Lobster.—Prepare the meat as for salad, reserving the coral; season highly with cayenne, mustard, salt, and some pungent sauce, and mix all together thoroughly. Rub the coral smooth, moistening with vinegar until it is thin enough to pour easily, and have it ready to add to the lobster. Put the lobster into a porcelain sauce-pan, with just enough hot water to keep it from burning, and cover it; let it boil up once, and add the sauce, prepared as above; then stir in a tablespoonful of butter, and when it boils again, take the pan from the fire. This is a famous supper dish.

Fried Lobster.—To be fried, the lobster must be bled; separate the body from the tail; then cut the tail in pieces, making as many pieces as there are joints. Put these pieces in a frying-pan, with two or three ounces of butter and an onion minced fine; set on a brisk fire, and stir occasionally till they are fried; then add a bunch of seasoning, composed of three sprigs of parsley, one of thyme, and a clove; add also salt, pepper, and three gills of Madeira, Catawba, or Sauterne wine. Boil gently till reduced one-half; dish the pieces of lobster; add two or three tablespoonfuls of gravy to the sauce, stir it, give one boil, and turn it over the lobster through a strainer. Serve hot.

Lobster Farcie.—Pound in a mortar the meat and coral of 2 fine lobsters, with 3 ozs. butter, 2 anchovies, 1 blade powdered mace, cayenne, white pepper, and salt, the juice of 1 lemon, 4 ozs. of crumb of bread, the yolks of 2 raw eggs, 1 gill of cream, and 1 gill of broth. Fill the empty shell, sprinkle with crumbs, bake 10 minutes.

Patties (Lobster).—Cut the meat of 1 large lobster, with the coral, into small dice; bone 2 anchovies; cut them into small dice with 2 ozs. mushrooms, nutmeg, cayenne, salt, and

Lobster Patties.

1 glass of white wine. Simmer 3 or 4 minutes, then add ½ pint of white sauce, the yolk of an egg, and 2 ozs. of butter. Empty the patties, and fill with the lobster.

Potted Lobster. — Separate carefully the flesh of freshly-boiled lobsters from the shells and from the tough red skin of the tails; mince the fish up quickly with a sharp knife, turn it immediately into a large mortar, and strew over it a mixed seasoning of fine cayenne, pounded mace, lightly grated nutmeg, and salt; this last should be sparingly used in the first instance, and should be reduced to powder before it is added. Pound the lobster to a perfect paste, with from two to three ounces of butter to each fish if of large size, but with less should they be small, and the lobster-coral previously rubbed through a sieve. When there is no coral, a fine color may be given to the mixture by stewing the red skin of the tails *very* gently for ten or twelve minutes with part of the butter which is used for it, but which must be strained and allowed to become perfectly cold before it is mixed with the meat. The degree of seasoning must be regulated by the taste; but no flavor should predominate over the lobster itself, and all over-spicing must be avoided. Before the mixture is taken from the mortar, it should be set over the ice for a short time, or placed in a cool closet to render it firm before it is pressed into the potting-pans or moulds. In putting into these, be careful to press it into a compact, even mass; smooth the surface, and run a little clarified butter over when it is only *just liquid*, for if hot it will prevent the fish from keeping. Send to table garnished with light green foliage; or with ornamentally cut paper fastened round the mould; or with a small damask napkin tastefully arranged about it.

Salad (Lobster). (*See* SALADS.)

Sauce (Lobster).—Take a large fresh lobster, carefully pick out the berries and all the inside; cut it small; make a sauce with a lump of flour and butter (half and half), a little milk or cream, a very small quantity of essence of anchovy, a very little pounded mace, and cayenne; then pull the rest of the lobster to pieces; add the sauce by degrees to the berries, and put in the lobster. Boil, stirring all the time, and serve.

LOCKJAW. (*See* TETANUS.)

LOTION.—A medical preparation used as an outward application for bruises, burns, or hurts of any kind, for allaying local inflammation, or for stimulating some indolent sore or ulcer. Lotions are of various kinds, such as refrigerating, sedative, astringent, stimulating, or evaporating, according to the effect they are employed to produce. The following are those most often prescribed in general practice.

Arnica Lotion.—Tincture of arnica, one part, water from five to eight parts. Mix together.

Astringent Lotion.—Dissolve one drachm of alum, and one drachm of sugar of lead, in a pint of cold water.

Evaporating Lotions.—Dissolve 2 drachms of sal-ammoniac in a pint of camphor-water, and add one ounce of spirits of sulphuric ether. Or, mix two ounces of spirits of wine, or three ounces of brandy, with a pint of cold water. To secure evaporation, free access of external air is necessary; a single piece of linen should be dipped in the lotion and laid on the injured part, and no other covering must be placed on this. As fast as the linen dries, it should be saturated afresh.

Raspail's Sedative Lotion.—Take of liquid ammonia, two ounces; camphorated spirit of wine, one-third of an ounce; coarse salt, one

ounce; rain-water; one quart. Mix the camphorated spirit and the ammonia together in a bottle; stop it up carefully, and shake. In another vessel dissolve the salt in the rain-water, adding a few drops of liquid ammonia; when it is completely dissolved, and its impurities have settled, pour it off gently, or filter it through filtering paper. Then pour in rapidly the mixed spirit and ammonia; cork it, and shake well together. It is then ready for use, but must always be kept tightly stopped. This lotion is excellent to apply to the bites of insects and even of venomous snakes. It is also much used as a remedy for headache.

Stimulating Lotions.—Mix an ounce of spirits of wine with half a pint of camphor-water. Or, dissolve three grains of sulphate of copper in one ounce of water.

LUMBAGO.—A rheumatism or rheumatic pains in the loins and small of the back. Its cause, and the manner of treatment are the same as for rheumatism in general. (*See* RHEUMATISM.)

LUNACY. (*See* INSANITY.)

LUNAR CAUSTIC.—A term applied to nitrate of silver, cast in sticks, and used by surgeons for cauterizing purposes. A great improvement has lately been made in its manufacture by melting with it a certain proportion of chloride of silver, which has the effect of rendering the stick flexible instead of brittle.

Lunar caustic is a deadly poison and should be kept out of the way, especially of children. In case of poisoning, give a teaspoonful of common salt in a glass of water, and repeat in ten minutes. Then a dose of castor oil, to be followed by a drink of linseed-tea or barley-water.

LUNCH.—Where late dinners are the custom it is necessary that something should be eaten in the long interval between breakfast and dinner, and this meal is called lunch. The best time for lunch is either twelve or one o'clock, according as the breakfast hour is early or late; it should not be later than one o'clock or it may spoil the appetite for dinner. The hour, moreover, should always be the same; and the meal should never be shirked, as it is too apt to be by business men, in favor of any of those miserable pretexts of the bar-room or confectionery-counter which are among the most fruitful causes of dyspepsia and its train of ills. Lunch should be made a regular repast, to which the guest may sit down, eating and enjoying his food deliberately.

The very best mid-day refreshment for busy people, involving the least possible interruption to their pursuits, is a bowl of good soup; such as *consommé* (with vermicelli or macaroni), mock-turtle, ox-tail, gumbo, or giblet. All these combine the advantage of being hot, of taking little time to eat, and of containing much nutriment in small bulk. Bread may be soaked in any of these, or eaten as an accompaniment. If they cause thirst, it may be allayed with a wineglassful of toast-and-water, or a little cold tea.

The three following Bills of Fare are given for entertainments, in order to show the manner of the serving. The plates are to be changed precisely as for dinner. Those dishes which are printed in italics may be omitted if desired.

SPRING.

LUNCHEON FOR TEN PERSONS.

Consommé, with vermicelli. (Sherry.)
Boiled blue-fish, with lobster sauce. / Potato croquettes. — Haute-Sauterne.
Vol-au-vent of oysters. / *Quenelles of partridge.* / Green peas. — Chambertin.
Roast sirloin of beef à la Jardinière. / Artichokes au gratin. — Claret.
Punch à la Romaine.
Woodcocks on toast. / Chicoree salad. — Champagne.
Plum pudding glacé.
Assorted cakes, crackers, bonbons, coffee.

SUMMER.

LUNCHEON FOR EIGHTEEN PERSONS.

Oysters à la poulette. Rudesheimer.
Sorrel soup aux crôutons. Madeira.
Salmon cutlets, broiled, with green peas. — Claret.
Chickens, roasted, with apple sauce. / Macaroni, with cheese. — Chateau Yquem.
Fricandeau, with purée of spinach. — Champagne.
Lobster salad. / Crackers and cheese.
Ice cream, milk punch, frappee.
Cakes, bonbons, coffee. Maraschino.

WINTER.

LUNCHEON FOR SIX PERSONS.

Mock turtle soup. Sherry.
Filets of flounders, sauté, caper sauce. / Fried potatoes. — Marcobrunner.
Bouchées of chicken. / Cauliflower. — Red Hermitage.
Roast turkey, with stewed mushrooms (white).
Reed birds, "au petit salé." / Fried oysters. — Pommèry.
Ice cream, cakes, etc.
Café noir.

LUNGS, Bleeding of the. (*See* BLEEDING.)

LUNGS, To test the state of the.—Those desirous of ascertaining the true state of their lungs may do so by drawing in as much breath as they conveniently can; they are then to count as many as possible in a slow audible voice, without drawing in more breath. The number of seconds they continue counting must be carefully observed. When the lungs are in a sound condition, the time will range as

high as from twenty to thirty-five seconds. In a consumptive the number does not exceed ten, and is often less than six seconds; in pleurisy and pneumonia it ranges from nine to four seconds. The progress and even the commencement of consumption, or of any other pulmonary disease, can be traced in this way, if the capacity of the lungs in time of health is known by the same standard.

LUPIN. — One of the prettiest of the half-hardy annuals. It will grow in any soil even in the poorest, but will repay a little attention in the way of manuring and watering. There are many varieties of the Lupin. They bloom from June to September, and throw out blue, white, yellow, and pink flowers. Sow the seeds where they are to bloom in May, or as soon as the sun begins to feel warm on the ground. They will spring up year after year.

LUSTRING.—Often corruptly written *Lutestring*. A species of stout, glossy, bright silk stuff, used for ladies' dresses, etc. It is considered more durable than ordinary silk, but is hardly so much used now as formerly. There are many qualities and colors.

LYE. — Water impregnated with alkaline salt from wood-ashes. It is very useful in many domestic operations, particularly in the making of common soap. It can be very easily made by putting the ashes in a vat or box sloped gently forwards, with an aperture at the bottom in front for the escape of the lye into a vessel beneath. Pour water on the top every day—just enough of it to keep it dropping out at the bottom. Of course the lye will be strong in proportion to the length of time taken by the water in draining through.

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MACARONI. — An excellent quality of macaroni is now made in this country, at Philadelphia and elsewhere, but those imported from Italy are the best. The Naples macaroni, of which the pipes are larger and somewhat thin, should be selected for the table in preference to the Genoa, which is less in size but more substantial and better suited for *timbales* and similar fanciful dishes. *Ribbon macaroni*, though more delicate in flavor and more quickly boiled than pipe macaroni, is far less frequently seen at our tables; yet it is extremely good in many simple forms and very wholesome, therefore especially suited to invalids and children. It may be boiled and eaten quite plain instead of vegetables or rice; or with a *compote* of fruit; or with sugar and cinnamon, or lemon-juice; or it may be prepared in any of the ways indicated for the pipe macaroni.

Macaroni should be quite fresh, as it contracts a most unpleasant flavor from being too long stored. The finest quality is yellowish in color, and does not burst or break up in boiling; it should swell considerably and become quite soft, but if it does not retain its form when boiled, it has not been made of the right kind of wheat.

A-la-Creme (Macaroni).—This is a very delicate mode of dressing macaroni. Boil eight ounces in the usual way, and by the time it is sufficiently tender dissolve ten ounces of any rich, well-flavored white cheese in three-quarters of a pint of fresh cream; add a little salt, a rather full seasoning of cayenne, from a half to a whole saltspoonful of pounded mace, and two ounces of butter. The cheese should be sliced very thin, and the hard part adjoining the rind pared away; it should be stirred into the cream without intermission until it is entirely dissolved, and the whole is perfectly smooth. The macaroni, previously well drained, may then be tossed gently into it; or, after it is dished, the cheese may be poured over the top. The whole, in either case, may be thickly covered before it is sent to the table with fine crumbs of bread fried to a light brown and dried perfectly, either before the fire or in an oven. Rich white sauce or bèchamel, made not very thick, with an additional ounce or two of butter, may be used to vary and enrich this preparation.

Baked Macaroni.—*Take*:—Half a pound of pipe macaroni, break it in pieces about an inch long, and put them into a sauce-pan of boiling water, slightly salted; boil slowly for twenty minutes; then drain well and put a layer in the bottom of a buttered pie or pudding-dish; grate some rich cheese over the top, and scatter over it some bits of butter. Put in another layer of macaroni, and then the cheese again; fill the dish in this order, having macaroni at the top, buttered well; add a few spoonfuls of cream or milk and a pinch of salt. Cover over, and bake half an hour; then brown nicely, and serve.

Boiled Macaroni.—Most cooks soak macaroni in milk and water for an hour or more before boiling, that the pipes may be swollen to the utmost; but this is apt to render it pulpy. The better way is to drop it lightly into a pan of fast-boiling water, into which a little salt and a teaspoonful of butter have been previously thrown, and of which the boiling should not be stopped by the addition of the macaroni. Boil gently from twenty minutes to three-quarters of an hour; macaroni should always be perfectly cooked, for otherwise it will prove very indigestible, but the pipes should remain entire. The Italian macaroni requires longer boiling than the American. Ribbon macaroni will generally cook in from fifteen to twenty minutes.

Richelieu, or Veal and Ham Macaroni.—Boil three ounces of macaroni tender; beat up

two eggs; put about a pint of nicely flavored minced veal or ham into a sauce-pan, with a little grated lemon-peel; add the macaroni and eggs; mix well, and boil five minutes. Serve with good gravy.

Side Dish of Macaroni.—*Take:*–A quarter of a pound of macaroni, and scald it till tender, but not so as to break or make it stick together; when scalded, cut it in pieces about one-third of an inch in length, and a perfect pipe. Then make a mince of every kind of meat, game, and poultry you happen to have cooked, adding a little fat and lean of ham or bacon; add a piece of onion, finely chopped, salt, pepper, a little cayenne, about a teaspoonful of catsup, the same of Worcestershire sauce, and a small quantity of gravy to moisten the whole. Butter a pie or pudding-dish thickly, and stick the macaroni closely into it, so as to give the appearance of a honeycomb when turned out; fill up with the mincemeat, laying the rest of the macaroni at the top. Cover tightly with a cloth, set it in a pan of water, and boil gently three-quarters of an hour, taking it out five minutes before turning it out of the dish. Serve with a tureen of gravy, putting a very little in the dish.

Timbale of Macaroni. — Simmer half a pound of macaroni in salted water till tender, but not too soft, and strain the water from it; beat five yolks and the whites of two eggs, and mix with half a pint of cream; mince the breast of a chicken and some ham (*enough to make half a pound*), and mix with them three tablespoonfuls of grated Parmesan cheese, seasoning with pepper and salt; mix all the above with the macaroni, and put it into a well-buttered mould. Let it steam in a stew-pan of boiling water about an hour, and serve hot with rich gravy.

MACAROONS (Almond). — *Take:*– Almonds, ½ lb; rose-water, 1 tablespoonful; eggs, whites of 3; white sugar (*powdered*), ½ lb.

Soak the almonds in boiling-hot water till the skin will rub off easily; then wipe them dry, removing the skins, and pound them to a paste with the rose-water. Beat the whites of the eggs to a stiff froth, then stir the sugar in gradually, and then add the almonds. When the almonds are well mixed in, drop the mixture by spoonfuls upon buttered baking plates or letter-paper, several inches apart, sift sugar on them, and bake to a light brown in a slow oven; it will take fifteen to twenty minutes.

The flavor of these macaroons is improved by substituting an ounce of bitter almonds for an ounce of the sweet; and they are sometimes made with an equal weight of each.

Cocoa-nut Macaroons. — Rasp a fresh cocoa-nut, spread it on a dish or tin, and let it dry gradually for a couple of days; add to it double its weight of fine sifted sugar, and the whites of eight eggs, beaten to a stiff froth, to the pound. Roll the mixture into small balls, place them on a buttered tin, and bake them in a very slow oven twenty minutes. Move them from the tin while they are warm, and store them in a perfectly dry canister as soon as they are cold.

Filbert Macaroons.—Heat a quarter of a pound of filbert meats till the skin will rub off; when cold, pound them to a paste with a little white of egg; add a quarter of a pound of sifted white sugar and the white of one egg; mix well, and bake on buttered tins or letter-paper.

Flour Macaroons.—These are plain, and are nearly as good as any other. Work a pint of sifted white sugar with one beaten egg, till a smooth paste is formed; then add a little sifted flour, so as to mould it with the hands. Flavor it with rose-water, essence of lemon, or any essence, and proceed as for almond macaroons.

Orange-flower Macaroons.—*Take:*–Pounded sugar, 2 lbs; orange-blossoms, 2 oz; whites of eggs, 7.

The orange-blossoms must be freshly gathered; cut them very small with a pair of scissors *into* the sugar; mix together, add the whites of the eggs, and whisk the whole until the mixture looks like snow; then drop by spoonfuls on buttered letter-paper, and bake about twenty minutes in a very slow oven.

MACE.—The reddish membrane surrounding the shell which contains the nutmeg. It is dried previous to being packed in tight bags. Its general qualities are the same as those of nutmeg, but it is considered the choicest of all the spices. It has an agreeable aromatic odor, and a hot, biting taste. It contains a very large proportion of essential oil, on account of which mace is never employed alone in medicine, though possessing the usual carminative properties of the other spices. Mace should be pounded fine, and corked tight in small glass bottles with mouths large enough for a junk-bottle cork, and kept in a tight tin box. Or it can be kept in small tin boxes with tight-fitting covers. To make *essence of mace*, *see* ESSENCES.

MACERATION. — The infusion of substances in cold liquids. The term is usually employed with regard to vegetable substances, when they are reduced to powder and exposed to the action of water, or any other liquid, without the assistance of heat, in which last respect it differs from *infusion* and *digestion*. Maceration is useful either when it is required merely to soften the parts of the substance operated on—as when cinnamon and cloves are macerated in water before distillation; or in cases where heat would be injurious—as when volatile or aromatic substances are used.

MACKEREL.— The *common* or *spring mackerel* is one of the finest and most beauti-

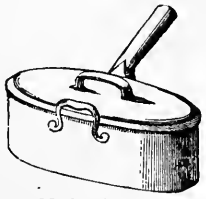
Mackerel.

ful of fish. It is never found alive on the stands, and is seldom fat when fresh, at least

not so fat as formerly; but it is a very choice table-fish. It generally weighs about a pound. In season, about the first of May, and found scattering through the summer. It may also be had either smoked or salted. The *thimble-eyed* or *fall mackerel* are rather smaller than the preceding, and have very large, prominent eyes. When found in the markets, they are usually strung together, but are not much thought of for the table. In season from September to November. The *Spanish mackerel*, perhaps the choicest of all fish, are usually plentiful in the months of June, July, August, and September. They resemble the spring mackerel in general appearance, but are a much larger fish, and without the dark lines on the sides. They are sold usually at high prices, and their weight ranges from two to eight pounds.

Baked Mackerel.—After the fish have been cleaned well and washed in cold water, fill the insides with stuffing; sew them up; arrange them with the roes close together on a coarse baking-dish; flour them lightly; strew a little fine salt over them; and stick bits of butter upon them; or, melt the butter in a sauce-pan, and pour it equally on them. Half an hour in a moderate oven will bake them. Oyster stuffing is always appropriate for any kind of fish which is in season when the oysters are; but mackerel are commonly served with one of the ordinary stuffings for which receipts are given in article on STUFFING. Lift them carefully into a hot dish after they are taken from the oven and send melted butter and a quartered lemon to table with them.

Boiled Mackerel (*Fresh*).—Open the fish sufficiently for the insides to be perfectly cleansed, but not more than is necessary for this purpose; empty them with care, and wash them delicately clean, afterwards wiping them dry.



Mackerel Kettle.

Then put them into a pot with enough salted water to cover them, and boil gently from twenty minutes to half an hour; drain well before dishing. Serve with a sauce made by taking a teacupful of the water in which the fish were boiled and putting it into a sauce-pan with a tablespoonful of walnut catsup, the same quantity of anchovy sauce or paste, and the juice of half a lemon; let this boil up well, and then add a tablespoonful of butter, and a tablespoonful of browned flour wet in cold water; boil up again, and send to table in a sauce-boat. Fennel or gooseberry sauce is also very good; and plain melted butter will answer.

Boiled Mackerel (*Salt*).—Soak one night in lukewarm water, and change this to cold water about half an hour before cooking. Put on with just enough water to cover them, and boil gently for twenty or twenty-five minutes. Drain carefully, and pour melted butter on them before serving.

Broiled Mackerel (*Fresh*).—Cleanse the fish as for boiling; split it open so that when laid flat the back-bone will be in the middle; dust lightly with salt, and lay on a buttered gridiron over a clear fire, with the inside downwards, until it begins to brown; then turn it over. When done, lay on a hot dish, butter plentifully, lay another hot dish over it, and let it stand two or three minutes before sending to table.

Broiling *whole* is an excellent way of cooking mackerel. Cleanse the fish without opening it more than needful; dry it well, either in a cloth or by hanging it in a cool air till it is stiff; make with a sharp knife a deep incision on either side of the back-bone, and about half an inch from it, and with a feather put in a little cayenne and fine salt mixed with a few drops of good salad oil or clarified butter. Lay the fish on a moderate fire upon a well-buttered gridiron; loosen it gently should it stick, which it will do unless often moved; and when it is equally done on both sides, turn the back to the fire. About half an hour will broil it well.

Broiled Mackerel (*Salt*). — Soak over night in lukewarm water; change this early in the morning for cold, and let the fish lie in it till time to cook; then proceed as for fresh mackerel.

Fried Mackerel.—Cut off the head; split the fish quite open all along the belly and below it; lay it flat without removing the back-bone; dust with flour and salt, and fry in butter. Serve garnished with fried fennel.

Potted Mackerel.—Clean the fish without opening them; draw the intestines, but leave the roes and the milts. Remove the heads and tails, and then cut the fish crosswise into three equal portions. Wash, drain, and wipe dry with a cloth. Take an oval plate-dish, with a close-fitting cover, or, in the absence of this, a round earthen or stone pot. If this latter has no cover, a wooden one may be made to fit it. Put at the bottom a layer of pieces of fish; season them with salt, whole pepper, cloves, and allspice; then another layer of fish, then another sprinkling of seasoning, and so on. Pour over all these, until they are well covered, a mixture of half vinegar and half water. Put on the lid, and simmer gently over a slow fire for about half an hour, or until the fish is thoroughly done. Let it cool with the lid on.

Fish so potted will keep a long time, if always immersed in the liquor; and the very bones become eatable. It affords a convenient resource in an emergency; for a few pieces of

the fish can be taken from the pot, laid on a small dish, a little of the liquor poured over them, and served garnished with sprigs of parsley. What is left can be returned to the pot.

Stewed Fresh Mackerel. (With wine.)—Work smoothly together a large teaspoonful of flour and two ounces of butter, put them into a stew-pan, and stir or shake them round over the fire until the butter is dissolved; add a quarter of a teaspoonful of pounded mace, half a teaspoonful of salt, and a pinch of cayenne; pour in by slow degrees three wineglassfuls of claret (or port wine and a little lemon-juice). When the sauce boils, lay in a couple of fine mackerel, well cleaned and wiped quite dry; stew them very gently for fifteen or twenty minutes, and turn them when half done; lift them out and dish them carefully; stir a teaspoonful of made mustard to the sauce, give it a boil and pour it over the fish.

MADEIRA.—A white wine made in the island of Madeira, which, when genuine, is one of the richest wines in the world, having great strength, dryness, and delicacy of flavor. It is extremely durable in all climates, and improves with age. Maderia, being a strong wine naturally, has, least of all, occasion for the addition of brandy; yet it is the constant practice to add some of this spirit previous to exportation, which is incorporated in time. The inferior kinds are made up with almonds and various additions; and, in fact, the adulterations are so numerous that the wine has lately fallen into comparative disrepute. The prejudice against Maderia has been considerably increased by the supposed discovery that it contains a little more acid than sherry, but this opinion has been disputed, and seems to have been derived from the inferior Madeiras.

Several years ago, the vines failed in the island of Madeira, and the best Madeira is now very old. The new wine made from vines planted in the island within a few years is excellent for its age and is of great promise.

Madeira keeps best in demijohns in a moderately warm place, though it keeps quite well in bottles. Warmth seems to ripen it and bring out its best qualities. It should be drunk about the temperature of the room.

MAGGOTS.—These disgusting larvæ are generated in meat which has been imperfectly cured, which has been kept for too long a time, or which has been exposed to the attacks of the green fly. Cut away the part which they have penetrated, and the meat should be dipped anew in brine, and the outside rubbed with a mixture of dry ashes and salt. When they appear in vegetables, the vegetables must be thrown away.

MAGNESIA.—The *oxide of magnesium* occurs in two forms, one more bulky than the other. It is obtained by burning the carbonate, and then appears as a white powder with hardly any taste, almost insoluble in water, and slightly alkaline in reaction. When introduced into the stomach, magnesia acts as an antacid, and its antacid properties are considerable. If not all neutralized, what remains passes on into the intestine where, if given incautiously, it is apt to accumulate. In the small intestine it acts as a gentle laxative, in very large doses having considerable power. It also passes into the blood and tends to render the urine clear if previously turbid from urates. It is given as an antacid in heartburn, and is still more useful for the acidity of the intestines which gripes, and so is useful along with rhubarb in the early stages of diarrhœa. It is also useful when there is acidity with a tendency to constipation, as in gouty subjects. In these patients it does remarkably well. On account of alkalinity, too, magnesia is often given as an antidote to poisoning by mineral or vegetable acids, and for this it is well suited. It neutralizes the acid and protects the stomach from injury. Many metals are also precipitated by it and rendered nearly insoluble. Magnesia has also been given as a remedy for vomiting when that has seemed to depend on excess of acid; but other remedies are more powerful.

The *carbonate of magnesia* also exists in two forms—heavy and light. It is prepared from the sulphate of magnesia by precipitating by carbonate of soda. The powder so thrown down is a white, almost tasteless substance, insoluble in water, and nearly neutral in reaction. A solution of the bicarbonate of magnesia has long been in use under the title of fluid magnesia; it is an admirable preparation. This may effervesce slightly; when opened, the liquid is clear and is not bitter. Carbonate of magnesia acts in much the same way as magnesia itself, only when it is introduced into the stomach, and meets with an acid, it gives off its carbonic acid, which may be unpleasant. Sometimes, however, the carbonic acid gas so set free is pleasant to the stomach. The great disadvantage these remedies labor under is their bulk, so much requires to be taken; but the objection does not apply to the fluid magnesia.

Citrate of magnesia, the effervescent preparation popularly used as a laxative, contains, besides the magnesia, citrate or tartrate of sodium or potassium. It is pleasant to take, and mild in its operation.

MAGNOLIA.—This is the most beautiful of all flowering trees, and in several of its varieties is unapproached. The *magnolia grandiflora* is a native of the Southern States, where it grows wild in the low swamp lands of the coast in the greatest abundance. This is the noblest species of the genus; its great height (sometimes 80 feet), its shining, dark-green leaves, its fragrant white flowers, a foot in diameter and exquisitely fine, form a combination of rare magnificence. The *French magnolia* is the kind usually cultivated in gardens, especially in the Northern States. It grows to the height of about twenty feet, and throws out a profusion of flowers of the utmost fragrance early in the Spring. It is perfectly hardy, and will flourish in any good garden

soil, though a moist, rich spot, not too shady, is best. There are also one or two species of the magnolia which can be cultivated as parlor and greenhouse plants. They require the same treatment as other window plants.

MAHOGANY. (*See* FURNITURE.)

MAIZE. (*See* INDIAN CORN.)

MAJOLICA.—A kind of Italian pottery, consisting of a common earthen-ware ground, covered with a fine glaze, and enamelled with painted designs. It is used chiefly for ornamental purposes, and is usually found in the shape of large vases, urns, etc. The antique forms are very fine, and some of the designs equal the best Japanese painted pottery; but in general, the ware has a coarse, tawdry, inartistic look. It is not so much used now as formerly.

MALARIA.—A term now generally used to designate a certain effluvium or emanation from decaying animal or vegetable substances—the word *miasm* being used in the same sense, but generally with the adjunct of *marsh*. Marshes, whether salt or fresh, are prolific sources of malaria; but it is the product also of different sorts of soil, as wet meadows, grounds alternately flooded and drained, the mud left by the retiring tide in seaport, and estuaries, land covered with low and dense brushwood, or with reeds and grass, or nearly cleared of its wood,—all these, particularly in warm climates, are prolific sources of malaria. It will also reappear in districts and even cities from which apparently it had long since been banished on account of the digging of a well, or of any excavation which exposes new soil to the surface during hot weather. The concurrence of vegetable matter susceptible of decay, of moisture, either on the surface or a short distance below it, and of a certain warmth of temperature, is necessary for its evolution; and of these, long-continued heat has the greatest influence in increasing the intensity of the poison. It is not necessary that the amount of vegetable matter be great, or its growth recent, since malarious diseases are often caused by the draining of ponds and lakes; neither does the quantity of water require to be large, just enough moisture to cause the vegetable matter to decay when exposed to the heat of the sun is more dangerous than a greater amount; and it is only when this moisture is being dried up that it becomes pestilential.

It is observable that malaria is more abundant and more powerful in Spring and Autumn than at any other time of the year, and for this reason: Towards the end of Summer trees and plants lose their foliage and flowers, and scatter their seeds; an immense quantity of dead vegetable matter is thus distributed on the ground; and if the requisite degree of moisture be present, the heats of Autumn soon cause decay and extricate the peculiar substances which cause ague when disseminated through the air. Marshes again, towards the end of Summer, have lost much water by evaporation, and the water-plants which grow in most marshes in prodigious abundance are in a position the most favorable for decomposition. The extrication goes on throughout the Autumn, but it is arrested by the frosts of Winter which congeal the water and render decay impossible. In the Spring, however, when the sun again acquires power, the remnants of vegetable matter which escaped decomposition during the previous autumn, and which have lain dormant all the winter, are speedily acted upon, and the evolution of malaria begins.

As a general rule malaria is pernicious in proportion to the proximity to the source; but to this rule there are numerous exceptions. Places at some distance, especially if situated upon an eminence, are sometimes affected with the same, or even greater intensity, than places nearer at hand. The distance to which the emanations may extend by gradual diffusion is estimated to be from 1400 to 1600 feet in elevaiton, and from 600 to 1000 feet in a horizontal direction; but when winds are blowing the distance to which the poison may be transported is unknown—instances are recorded of its being conveyed three or four miles. Though malaria is principally owing to heat, it is not in the hottest part of the day that its influence is the most pernicious, but in the evening and at night. Malaria is more liable to attack new-comers, and those unused to it, than inhabitants of the malarious district. It will sometimes not excite ague till the strength of the individual has been lowered by some cause or other; but it is a most insidious foe, and every one exposed to it should be constantly on guard against its inroads. Besides the more familiar effects of malaria—remittent and intermittent fevers—there are a number of organic affections of the spleen, liver, stomach, intestines, and mesenteric glands, also dropsy, palsy, apoplexy, and idiocy, which may be directly traced to its influence; while cholera, dysentery, and diarrhœa are among its most casual results.

Touching the means of preventing the generation of malaria, numberless methods have been tried; but there is no effectual remedy except thorough drainage, and attention to the principles laid down in the first part of the article on HOUSE. Professor Mentegazza, of Italy, has lately made the most important of recent contributions to the subject in the discovery that vegetable perfumes exercise a healthful and purifying influence on the atmosphere by converting its oxygen into ozone, and thus increasing its oxydizing influence. The essences found to develop the largest quantity of ozone are those of cherry-laurel, cloves, lavender, mint, juniper, lemons, fennel, and bergamot; those that give it in smaller quantity are anise, nutmeg, and thyme. The flowers of the narcissus, heliotrope, hyacinth, mignonette, and lily of the valley, develop ozone in closed vessels or in the open air. Flowers destitute of perfume do not, as a general thing, develop it; though the large sun-flower is one of the most powerful generators of all. Reasoning from these facts the Professor recommends the cul-

tivation of flowers in marshy districts, and in all places infested with animal emanations on account of the powerful oxidizing influence of ozone. The inhabitants of such districts, he says, should surround their houses with beds of the most odorous flowers.

Malaria, as we have already said, is more powerful at night than in the day; it will attack those sleeping on the ground floor, and exempt those at the top of the house; sleeping on the ground in the open air is almost sure to bring on an attack. Those exposed to it should take the greatest precautions against the night air, especially while asleep; the windows should be closed at dusk, and some perfume, mentioned above, kept in the bed-rooms. (*See* AGUE.)

MALIC ACID. (*See* ACIDS.)

MALT. (*See* BREWING.)

MALT LIQUOR. (*See* ALE, BEER, LAGER BEER, PORTER, and STOUT.)

MALT WINE.—I. Take of pale malt, ground, one bushel, and of boiling water twelve gallons; infuse or mash as for beer (*see* BREWING), and strain off the wort; then add forty pounds of loaf sugar and ten pounds of sugar candy, dissolved in thirty-two gallons of hot water; when cooled down to 55°, add one quart of yeast, and put it into a fifty-four gallon cask, to which add on the third day twenty pounds of raisins stoned. Let it work for three days; then pour in half a gallon of brandy, bung it down, taking care to fill the cask up with warm but *not boiling* water, if not already full. In four months rack it off into another cask and add another half gallon of brandy. In a month it will be fit to drink from the wood, and in two more to bottle for keeping.

II. (Inexpensive.) — To every gallon of water, put three pounds of brown sugar; boil ten minutes and skim it well; when the liquor is nearly cold put two ounces of yeast to it, and let it stand till the following day; then put it into a perfectly clean cask, with one pint of strong new ale in a state of fermentation, and one pound of raisins to every gallon. Let it stand twelve months before bottling it.

MANGE.—An eruptive disease which attacks several of the domestic animals, especially dogs and pigs. It is said to be produced by a minute worm which burrows under the skin, and produces a scaly pustule on the surface resembling the itch. It is caused by confinement, want of cleanliness, and bad air. It may be cured by anointing with an ointment composed of equal parts of lard and brimstone.

MARASCHINO. (*See* LIQUEURS.)

MARBLE, To Clean.— I. Brush a paste of chloride of lime and water over the entire surface, taking care to protect the adjacent wall-paper, or any kind of inferior gilding, which will be injured by the chlorine given off.

To remove *oil* from marble, make a paste of equal parts of crude potash and whiting, and apply as above.

Iron Stains may sometimes be removed from marble by wetting the spots with lemon juice, or oxalic acid and spirits of wine, and in a quarter of an hour rubbing the marble dry with a soft linen cloth.

To remove *ink-stains—see* INK.

II. Rub on with a brush a paste composed of a gill of ox-gall or a gill of strong soap-suds, and half a gill of turpentine, all mixed together and thickened with finely powdered pipe-clay. Have a second brush, small enough to go into the carving, etc. Having applied either of these pastes, let it remain undisturbed for two days, then wipe it off. If the marble is not then perfectly bright and clean, repeat the application a second or even a third time.

Or, dip a stiff brush (a worn-down paint-brush is good) in *Javelle* water, then in pulverized pumice stone; clean thoroughly, and rinse with cold water.

A hearth will be improved by rubbing occasionally with a flannel wet with linseed oil. Rub the oil in so as not to come off and grease other things. Next day go over it with a clean, dry cloth.

MARIGOLD.—One of the prettiest of the garden annuals, easily grown, and bearing bright golden flowers throughout the summer. Sow the seed in the spring, when the days have become warm and the nights exhibit no frosts; or they may be brought forward in pots so as to transplant to the open border in latter part of May. Sprinkle the seed lightly over the surface of the prepared soil, and rake them in, afterwards pressing them down with the palm of the hand. Water pretty freely, and when they come up, thin out and transplant to their proper places. The plants grow best when they are not crowded. Some of the new varieties of the Marigold are very attractive, but any of them is worth a place in the garden.

Marsh Marigold (called Cowslip in the Eastern States) is a common swamp or water-plant, which grows from eight to ten inches high, with quite a thick stem; when young the leaves can be used as greens as well as a pot-herb. In England the flowers are used for flavoring soup, stews, etc.

MARJORAM.—There are several species of Marjoram, but that which is preferred for cookery, and which is most frequently cultivated in gardens for the purpose is the *Sweet Marjoram*, also called "Knotted Marjoram." *Winter Sweet Marjoram* and *Pot-Marjoram* are also cultivated. They have all the same qualities, though in varying degrees. The *Common* or *Wild Marjoram* is found growing in the open fields on calcareous soils. This has nearly the same flavor as the cultivated varieties, but is inferior, and is seldom used except when the others are not at hand. The tops and leaves of the Marjoram are used both in a green and dry state, and as a relish-

ing herb in soups, stews, broths, stuffings, etc. The branches should be cut for drying (for winter use) in July or August, before the flowers open. For *Essence of Marjoram, see* ESSENCES.

MARKING CLOTHES. *See* INK. If indelible ink cannot be had, mark in cross-stitch with colored thread.

MARMALADE.—In making marmalade the same precautions must be observed as in making jam or jelly. Especial care must be taken not to scorch the fruit by placing it over too hot a fire and not to cook it too long.

Apple Marmalade.—Pare seven pounds of apples, and put them on to stew with a pint of water; when they are quite soft rub them through a strainer; add the same weight of sugar as of apples, and the grated peel of four lemons; boil nearly an hour, stirring all the time; ten minutes before taking it off the fire, add three ounces of essence of ginger. This is very useful throughout the winter.

Apricot Marmalade.—Remove the stones and hard portions of the skins of very ripe apricots, cut them in pieces, and set them on the fire in a preserving pan, with one pound of sugar to one pound of fruit. A quarter of an hour's boiling will be sufficient; or to ascertain when the marmalade is done, put a little of it on the tip of your finger, and if by applying the thumb and withdrawing it a small filament is formed, it has boiled enough. Stir the marmalade continually while it is boiling. If the flavor is liked, break half the stones, blanch their kernels in boiling water, and put them into the marmalade five minutes before it is removed from the fire; mix the whole well, that each pot may have an equal share of the kernels.

Barberry Marmalade.—Wash the barberries, stone them, add a quarter of a pint of cold water to every pound of fruit; and boil them till quite tender. Then prepare a syrup of a pint of water and a pound and a half of sugar to every pound of fruit; boil till quite stiff. Boil the barberries again till they become a jam: add them to the syrup and stir together over the fire, simmering it only for a few moments; and then turn it into the pots.

Lemon Marmalade. — Make same as Orange marmalade, allowing a pound and a quarter of sugar to a pound of the fruit.

Orange Marmalade.—Take sour oranges, 12 lbs; granulated sugar, 12 lbs. Pare the oranges in the same manner as you do apples, cover the parings twice their depth with cold water; boil until tender, then drain. Halve the oranges cross-wise, press out the juice and soft pulp, cover the white skins with three quarts of cold water, and boil half an hour; strain the water in the orange juice, and pound the skins through the colander until you have 2¼ lbs of pulp; add this also to the juice; cut the yellow rind, with scissors, in fine shreds; add to the juice, and boil ten minutes; add the sugar, and boil until it thickens.

Peach Marmalade. — Pare, stone, and weigh the fruit; and allow three-quarters of a pound of sugar to every pound of fruit. Put the fruit on the fire and heat slowly to draw out the juice, stirring up frequently from the bottom; after it is hot, boil quickly three quarters of an hour, stirring all the time. Then add the sugar, and boil five minutes, carefully removing the scum. Add the juice of a lemon for every three pounds of the fruit, and the water in which one-fourth of the peach kernels have been boiled and steeped. Stew all together ten minutes, stirring to a smooth paste, and remove from the fire. This is one of the choicest of the marmalades.

Pineapple Marmalade.—Select the largest, ripest, and most perfect pineapples that can be found; pare them and cut out all the blemishes. Grate them on a large dish, using a coarse grater, and omitting the hard core which goes down to the centre of each; or, in the absence of the grater, cut them into small bits. Add an equal weight of the best double-refined sugar (in lump), put them into a preserving-kettle, and mix well together: set over a moderate and very clear fire, and boil and skim well, stirring it after skimming; after the scum has ceased to appear, stir the marmalade frequently until it is done, which will be in an hour or an hour and a half after it has come to a boil. But if it is not smooth, clear, and bright in that time, continue the boiling till it is. This is a delicious preparation of pine-apple.

Quince Marmalade.—Pare, core, and quarter some of the inferior quinces, and boil them in as much water as will nearly cover them, until they begin to break; strain the juice from them, and for the marmalade put half a pint of it to each pound of fresh quinces; in preparing these, be careful to cut out the hard portions around the cores. Simmer them gently until they are very soft, then press them, with the juice, through a coarse sieve; put them into a clean pan, and boil until they form a dry paste; add for each pound of quinces and the half pint of juice, three-quarters of a pound of sugar finely powdered; and boil the marmalade for half an hour, stirring it constantly. It should be very firm, and bright in color. If made shortly after the fruit is gathered, a little more sugar will be required; and when a richer and less dry marmalade is liked, it must be boiled a shorter time, and an equal weight of fruit and sugar used.

Quince-and-Apple Marmalade.—Boil together, from three-quarters of an hour to an hour, two pounds of apples, pared and cored, in an equal weight of quince-juice (prepared as above); then take them from the fire, and mix with them a pound and a half of finely powdered sugar: when this is nearly dissolved, set the pan again over a brisk fire, and boil twenty minutes longer, stirring all the time.

MATELOTE.—A sort of stew that may be made of any variety of fishes, which

all take the same time to cook. Carp, tench, eels, and pike are very good.

For a matelote of any or all of these fish, after thorough cleansing and washing, let them lie a few hours sprinkled with salt, and rinse them again before cooking; if small, merely cut off the heads and tails—if large, divide the carp and tench into two or three pieces, and the pike and eels into convenient lengths. Put some button-onions into the stew-pan and brown them in butter; when half done, add a bunch of sweet herbs, put in the fish with as much good broth as will just suffice to cook it; add a little red or white wine, or good cider; stew closely covered until done, taking care that it does not burn. Arrange the fish in a hot, hollow dish; let the gravy from which it was taken boil a minute or two to reduce it, thickening it with a dust of flour; at the same time make what additions of seasoning you may think fit, such as a handful of shrimps, essence of anchovies, Harvey's or Worcestershire sauce, or Walnut catsup; pour this gravy over the fish, and serve with thin toasted bread.

The matelote may be varied indefinitely, according to the cook's resources. Cold lobster, shrimps, eggs, or oyster sauce, or simple melted butter, may be used as thickening. The seasoning may be cayenne or black pepper merely, or small pieces of hot pickles. For fish matelotes, the gravy should always be based on the liquor in which the fish was cooked. Cold matelote of eels and tenches is excellent, forming a stiff jelly; this requires a dash of vinegar, and a strong seasoning of pepper.

Egg (Matelote of).—Put into a stew-pan a pint of *vin ordinaire*, or cheap claret, or of better wine diluted with water. Add pepper, salt, a bunch of sweet herbs, an onion sliced, and a clove of garlic split. Boil five minutes, remove the flavoring materials, and poach eight or ten eggs in the liquor, as in water. When done, arrange them on a dish; thicken the liquor by stirring in a tablespoonful of butter rolled in a tablespoonful of flour; let it just boil up, and pour it over the eggs by way of sauce. A few shrimps, shell-fish, or ready-cooked pieces of eel or other fish, may be added before serving.

MATTRESS. (*See* BEDS and FURNITURE.)

MAYONNAISE. (*See* SALAD and SAUCE.)

MEAD.—A fermented liquor prepared from honey. To make, put four pounds of honey to every gallon of water, and boil it three-quarters of an hour, skimming carefully. To every gallon of this add an ounce of hops; then boil it half an hour and let it stand till next day, then put it into a cask, and to thirteen gallons of the liquor add a quart of brandy. Stop it up lightly until the fermentation is over, and then stop it very close. If a large cask is made, keep it a year before bottling; for a smaller cask in proportion.

Sparkling Mead.—Boil fourteen pounds of honey in six gallons of water for half an hour, breaking into it three or four eggs; then add half an ounce each of cinnamon, cloves, mace, and bruised ginger, and small bunches of marjoram, balm, and sweet-brier; boil a quarter of an hour longer, and pour it out to cool; then toast a large slice of brown bread, spread it over with fresh yeast, and put it into the liquor; let it ferment for a day, and then put it into the cask, but keep it open till the fermentation is complete. Then stop closely. It may be bottled in a month, and the corks must be securely tied.

MEASLES.—This disease is most common in infancy and early childhood, but may occur at any age. It is infectious, but with ordinary care is not fatal as a general rule. The symptoms are a feverish cold in the head, accompanied by a peculiar ringing cough, sneezing, running of the eyes and nose and itching of the face, while the eyes are red and very sensitive to the light. After some days of these symptoms small red crescent-shaped spots appear on the face, generally in clusters, and then spread over the rest of the body. The fever increases as the rash comes out. When it has been out three days, the spots turn brown, and the skin crumbles off like bran. The rash usually disappears in three or four days, or a week at farthest.

Treatment.—Keep the patient in a moderately warm room, shaded from any strong light. Inflammation of the lungs is very liable to occur in connection with measles, and should be guarded against by every precaution; the chest in particular should be well protected from cold. The diet should consist only of milk and light farinaceous food; and a sufficient amount of tepid drinks, such as lemonade (for older children), arrowroot, barley-water, etc., should be given. If the breathing is difficult, put on a mustard and oatmeal poultice to the chest, and keep the bowels open by injections if needful. In general this is all that is required, and the disorder will subside in from a week to ten days; but if the disease is not running its usual course, especially if inflammation develops itself, then medical aid should be summoned. After measles great care should be taken to keep the secretions in good order, and they should be rigidly watched for some time with that view.

MEASURES. (*See* WEIGHTS AND MEASURES.)

MEAT. (*See* FOOD AND SEPARATE MEATS.)

MEDICINES, For family use. (*See* DRUGS.)

MEDOC WINES. (*See* CLARET.)

MELONS. (*See* MUSK MELON and WATER MELON.)

MELT.—This small, dark, tongue-like piece attached to the lights of calves, lambs, sheep, and pigs, is not often used in this country, but can be made into a very wholesome and savory dish. The calves' melt is best, and next to this that of pigs. To cook: after soaking three or four hours in a little salt and water, and vinegar, wipe dry, pepper it well, and boil till tender; or, wash it thoroughly,

season it strongly with salt, and boil it over a brisk fire.

MENSTRUATION.—The function of menstruation generally begins when the female arrives at the age of puberty. which in this country is usually between the ages of fourteen and sixteen; and terminates at the "critical period" or "change of life," which usually occurs between the forty-fifth and forty-eighth years. It consists of sanguineous fluid which is exuded from the vessels of the uterus, and escapes through the vagina, the flow generally returning every twenty-eight days, and lasting from three to six days. About the first appearance of this discharge the constitution undergoes a very considerable change, usually indeed for the better, but sometimes for the worse; and the greatest care is then necessary. It is the duty of mothers especially, and of those who are entrusted with the education of girls, to instruct them early in the conduct and management of themselves at this most critical period of their lives. False modesty, inattention, and ignorance of what is beneficial or hurtful at such times, are the source of many diseases and misfortunes in after life. The eating of improper food, violent affections of the mind, or catching cold at this period, are often sufficient permanently to injure the health, or even to render the woman ever after incapable of procreation.

The first menstrual flow is nearly always preceded by symptoms which foretell its approach; as a sense of weight and pain in the loins, distention and hardness of the breasts, headache, loss of appetite, languor, chilliness, and sometimes a slight degree of fever. When these symptoms appear at the age at which the *menses* usually begin, everything should be carefully avoided which may obstruct the flow, and all means used to promote it, as rest from all unnecessary exercise, sitting frequently over steam from hot water, and drinking warm diluted liquors, as tansy tea, etc. After the flow has actually begun, the greatest care should be taken to avoid everything that may tend to arrest it. Women should be extremely cautious of what they eat and drink at the time they are out of order. Everything that is cold or apt to sour on the stomach should be avoided; as should fish, and all kinds of food that are difficult of digestion. Cold should be especially guarded against at these periods; more of the sex date their diseases from catching cold while they are out of order than from all other causes combined, probably. A degree of cold that will not in the least hurt them at another time will at this period seriously endanger the health. Rest also, at least comparative rest, from all the usual avocations, even from study, should be obtained. German mothers, notably the healthiest women in Europe, compel their daughters during the first few years to remain in bed during the first day of the discharge, and to abstain from all except the most necessary exercise until the discharge ceases. From the time the *menses* begin until about the twentieth year, this function is the main instrument in building up the most delicate, complex, and important apparatus known to nature: and unless especial attention is paid during all this period to the conditions upon which health depends—exercise, wholesome and appropriate food, and healthful dress—the neglect is almost certain to be dearly paid for in after-life. The fact that the years embraced in this period are those in which girls are expected to get the most important part of their education, greatly complicates the matter, and it is the conviction now of nearly every leading physiologist that the schools in which young women are trained must be organized on such elastic methods as to allow of a suspension of study, complete or partial, on the part of each pupil for four or five days in each month. When provision for this is not made in the schools, their parents should take the responsibility upon themselves.

When menstruation has once commenced, its regular occurrence is absolutely indispensable to good health; and from whatever cause it is obstructed (except from pregnancy) proper means should be used to restore it. For this purpose, exercise in the open air, wholesome diet, and, if the body be weak and languid, generous liquors will generally be sufficient; but if these fail recourse must be had to medicine. When obstructions proceed from a weak state of health, such medicines as promote digestion and give tone to the system must be used. The best of these are iron, Peruvian bark, and prepared steel. Infuse two or three ounces of iron filings in a quart of ale, and after it has stood two weeks, filter it, and take half a wineglassful twice a day (fifteen drops of tincture of iron in a little water will do as well,) or prepared steel may be taken in doses of half a drachm, mixed with a little honey or molasses, three or four times a day. The bark and other bitters may be taken either powdered or in infusion as most agreeable. When obstructions are caused by a bad state of the blood, or when they occur in women of a gross or full habit, mild purgatives, a spare diet, and attenuating drinks, accompanied by frequent bathing of the feet in warm water effect a cure. A half-spoonful of the tincture of black hellebore may also be taken twice a day in a teacupful of warm water. When the flow is simply delayed beyond the usual time, by a cold for instance, the feet should be bathed twice a day in warm water, a warm bath should be taken, warm applications placed on the bowels and a copious draught of pennyroyal or tansy tea taken warm, with a strong infusion of gin. An obstruction of the *menses* is often the result of other maladies. When this is the case, instead of trying to force that discharge (which might be dangerous), the treatment should be directed to restoring the patient's general health. When that is effected, the other will return of course, and without special treatment.

The flow of the *menses* is to be considered

immoderate when it either returns more frequently than is natural, or continues longer or is more abundant than usual; it is generally accompanied by pains in the back and belly, somewhat like those of childbirth. This is very weakening, and unless promptly arrested is apt to degenerate into dropsy or consumption. The most effective treatment here, as before, is in attention to the general health and the conditions which affect it. At the time of the flow, if it is very copious, the patient should lie on a rather hard mattress, with the head low; confine herself to a cool and slender diet, as veal or chicken broth with bread; drink lemonade or other cool acidulated liquors; and take small and frequent doses of nitre (say half a teaspoonful every two hours). If these do not arrest the flux, take two drachms of alum and one of Japan-earth, pounded together, divide into eight or nine doses, and give one three times a day. Persons whose stomachs cannot bear alum may take two tablespoonfuls of infusion of roses, three or four times a day, to each dose of which ten drops of laudanum may be added. If these should fail, half a drachm of powdered Peruvian bark, and ten drops of elixir of vitriol may be taken in a glass of red wine four times a day.

Leucorrhœa. — The discharge may offend in quality as well as in quantity. What is called *whites* or *fluor albus* is a very common disease, and is very injurious to delicate women. This discharge is not always white, however, but may be either pale yellow, green, or blackish; sometimes it is acrid and corrosive; sometimes foul and fœtid. It is attended by pain in the back, loss of appetite, swelling of the feet, and other signs of debility; and is generally the result of a relaxed state of the body, frequent childbearing, etc. It is obvious that hygienic measures adapted to improve the general condition of the body must play the chief part in the treatment of this disease; the food should be solid and nourishing, but easy of digestion, and the drink generous, as port or good claret. Tea and coffee should be avoided, and strong broth drunk instead. Besides this regimen, Peruvian bark or some other astringent bitters, or the muriated tincture of iron in 20 drop doses, largely diluted with water, three times a day after meals may be taken; and the loins and thighs may be sponged twice a day with cold water. The solution of acetate of lead, a teaspoonful to a half pint of water, may be employed as a wash or injection.

Difficult Menstruation (*Dysmenorrhœa*) is a disease in which the *menses*, though not entirely suppressed, are accompanied with severe pains in the back, loins, and bottom of the belly. It is caused by weak action of the vessels of the uterus, or spasm of its extreme vessels; and is to be removed by warm bathing, both topical and general, with the use of opiates (under a physician's advice), which should be employed on the first appearance of the symptoms that denote its approach. Many cases of dysmenorrhœa are due to causes which require local surgical treatment.

The cessation of the menses, commonly called "the turn of life," is a very critical period, and requires the most careful attention to the conditions of good health. If they cease all of a sudden, which is very seldom the case, the treatment is by rather low diet, plenty of exercise, and keeping the bowels open. For this latter purpose a little rhubarb, or a dose of Rochelle salts may be taken twice a week. Ulcerous, cancerous, or other chronic diseases sometimes follow upon this cessation and acute diseases of a dangerous nature are not infrequent; but these are matters with which domestic medicines must not venture to deal, and the advice of a physician must be sought. The most dreaded accident, however, is too profuse menstruation, the popular idea that this condition is natural at the turn of life, is incorrect. It is probably due to some uterine disease requiring the physician's attention.

MERINGUES.—Whisk to the firmest possible froth the whites of six fresh eggs. Lay some squares or strips of writing-paper closely together upon a board or thick dish. When these are ready, mix the eggs with three-quarters of a pound of the finest sugar, well dried, and sifted; stir them together thoroughly and then with a table or dessert-spoon lay the mixture quickly on the papers in the form of a half-egg, sift sugar over them without delay, blow off with a bellows all that does not adhere, and set the *meringues* into a moderate oven. The process must be quick, or the sugar melting will cause the cakes to spread, instead of retaining the shape of the spoon, as they ought. When they are colored to a light brown and are firm to the touch. draw them out, turn the

Meringues.

papers gently over, separating the *meringues* from them, and with a teaspoon scoop out enough of the insides to form a space for some whipped cream or preserves, and put them again into the oven, upon some clean sheets of paper, with the moist side uppermost, to dry. When they are crisp through, they are done. Let them become cold: fill with the cream or preserves; and then join together, two by two with a little white of egg, so as to give them the appearance shown in the engraving.

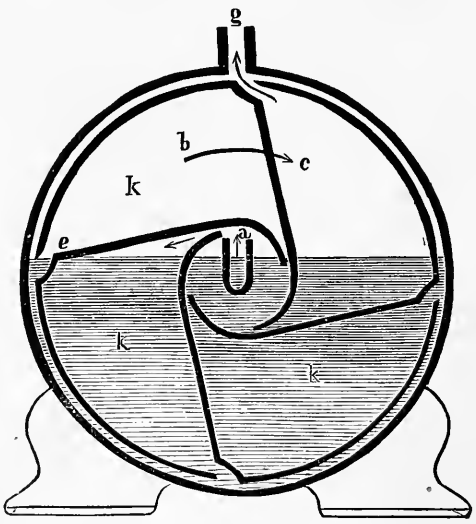
Italian Meringues.—Take the whites of six eggs and a pound of fine sugar, or half the quantity for a small number of *meringues*. Boil the sugar with a pint of water until it whitens, and begins to fall in flakes from the skimmer; in the mean time have the eggs whisked to a perfectly solid froth, and when the sugar has stood for three minutes after the boiling, and been worked well from the sides of the pan, mix them gradually but very quickly with it, until the mass is quite smooth and firm enough to retain its shape when moulded by a teaspoon; lay out the cakes on writing-paper, and set them in an oven so slow as to harden without coloring them. As they are not to be filled, but merely fastened together, they may be baked on tins.

Part of them may be varied by the addition of three or four ounces of pounded almonds mixed thoroughly with half the eggs and sugar, when a portion of the meringues have been moulded; these will require to be baked much longer than the others; they should be lightly browned, and crisp quite through.

Pears or other Fruit, (Meringues of.)—Fill a deep tart-dish nearly to the brim with stewed pears, and let them be about half covered with their juice. Whisk to a solid froth the whites of five eggs; stir to them five tablespoonfuls of sifted white sugar, and lay the mixture lightly and equally over the fruit; set the dish immediately into a moderate oven and bake it fifteen minutes. Cherries, damsons, or common plums, first stewed as for compotes (*See* COMPOTES) answer as well as pears for this dish; also apples, apricots, or peaches, boiled down to a marmalade with sufficient sugar to sweeten them moderately. The skins and stones of the peaches, apricots, and plums should be removed, but a few of the blanched kernels may be used to flavor the fruit.

MERINO.—An extremely fine twilled stuff, made of the finest wool, and used for dresses or shawls. The French excel in the manufacture of this article, and their best qualities, approximate to Cashmere; but there are also very good merinoes of English and American make. Merino is found of all colors and qualities, and is usually either three-quarters or six-quarters wide.

There are also merinoes made of a mixture of wool and silk.



Vertical Section of Water Meter Drum.

a, inlet; *g*, exit pipe; *kkk*, compartments of the drum; *e*, slit for exit of gas from compartments; *b*, *c*, direction of rotation of drum.

METERS, for Gas.—These are of two kinds, the water-meter and the dry-meter. The dry-meter has the advantage that it does not aid in the deposit of the water in the tubes, which is always going on more or less, and which it is necessary to avoid as far as possible by taking care that the pipes all drain into the meter, without any depending portions except at the burners, where it is impossible to avoid it.

A *Water Meter* consists of a drum divided into four compartments by partitions so arranged that when the water is at the proper level—so as to immerse about three-fifths of the drum—gas may enter into or escape from some of the compartments, but cannot do both at the same time in the case of any one compartment. The drum is moved by the pressureof the gas against the partitions. The motion of the drum is communicated to wheel-work which turns the hands on the meter dial. The measuring space of the meter depends of course upon the level of the water in

the drum; if this is too high the meter has to make more revolutions to pass a given amount of gas, and registers high or against the consumer. If the water is too low, fewer revolutions for the same amount are required, and it registers low or against the company. To prevent the former state of affairs so far as possible, the tube *n* (Figs. 2 and 3), is so arranged as to act as an overflow and stop the flow of gas completely if the water level is too high. To avoid other consequences of a low water level, the float *h* (Figs. 2 and 3) is applied which is attached to the valve *i* (Figs. 2 and 3) which shuts off the gas by falling upon its seat.

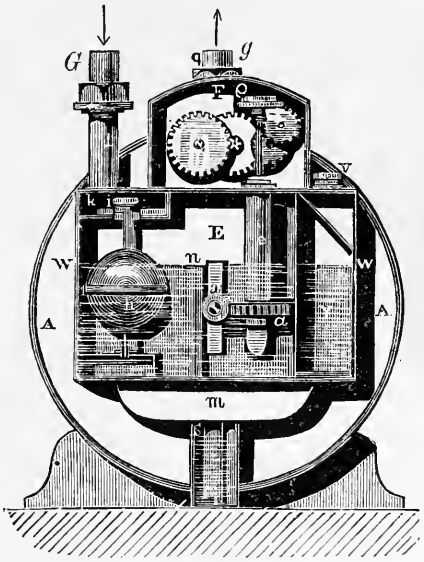


FIG. 2.

Vertical section of wet meter. *G* inlet, *g* outlet, *h* float, *i* valve, *n* overflow pipe, *u* plug to let off surplus water. F. wheel-work of dials; V, plug for pouring water into meter.

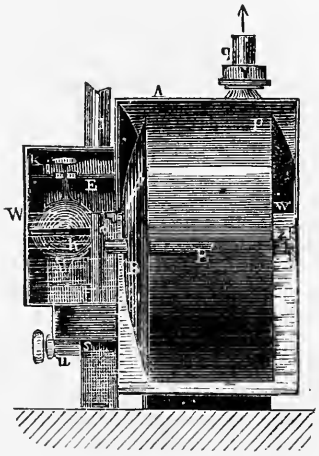


FIG. 3.

Vertical section of wet meter at right angles to that in Fig. 2. Lettering same as in Fig. 2.

The freezing of the water in the meter stops the motion of the drum, and consequently the flow of the gas. It may be thawed by pouring boiling water over the meter or into it. Glycerine solution of chloride of calcium, 4 lbs to the gallon, and similar liquids which neither freeze nor evaporate, are used to prevent this difficulty.

Besides the stoppage caused by freezing of the water in the meter, the gas in a house supplied through a wet meter will sometimes refuse to burn on account of too much or too little water in the meter. In such a case the plug *u* (Fig. 2) should be unscrewed to let out the excess from the overflow, or water should be poured in through V (Fig. 2) until it runs out at the overflow. Condensation of water in the pipes will often cause the lights to jump or extinguish them altogether. This is remedied by removing a burner and blowing strongly through the pipe will sometimes force the water out of the depression in the line of pipe where it has collected.

Freezing of moisture in the service pipe may also cut off the supply of gas. This can only be remedied by excavation and applying heat outside the house.

A dry meter consists of two chambers (sometimes three), usually circular, resembling in appearance a double bellows which are so connected that when one side is expanded, the other side is contracted. The gas passing through the meter fills and empties these chambers alternately, and by the reciprocating action thus produced, a train of wheel work attached to the hands of the

dials, is made to move. The mode of action may be best understood from Figs. 4 and 5. The

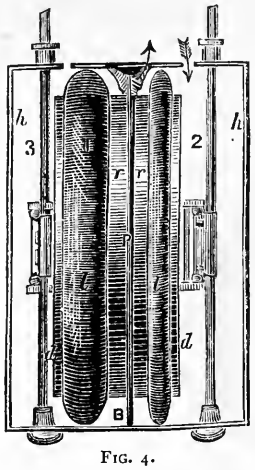


FIG. 4.
Side view of dry meter.

DESCRIPTION OF FIGS. 4 AND 5.—A inlet, B outlet, *rr*, *ll* and *dd* are the rings, leather belts and disks forming the measuring bellows, held in place by the guides *gg*, 2 and 3 in cut 4 and *s* in cut 5, attachment connecting with the arrangement for converting the reciprocating motion into rotary motion. The slide valves are so arranged that when one side of the bellows is full the flow of gas is turned into the other side which fills as the first one empties, the gas escaping through the pipe B.

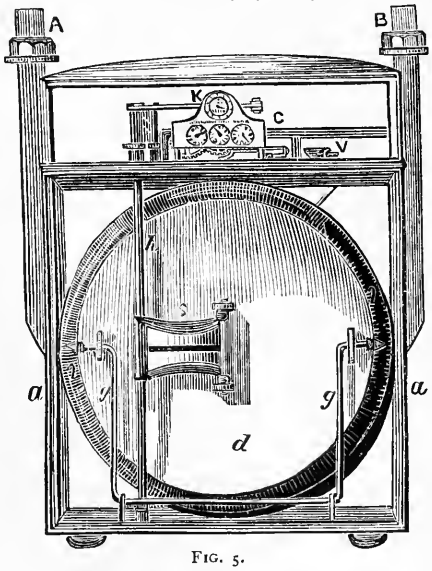


FIG. 5.
Front view of dry meter.

side valves sometimes stick, but may usually be started by suddenly turning on the gas at the service pipe. The flexible diaphragms of the bellows are apt after a time to grow stiff, when the lights become unsteady. Wet meters are simpler and less liable to get out of order than dry meters. The latter on the other hand are not subject to freezing, too much or too little water, or water in the house pipes.

The index of the meter is quite simple. A small dial above is not used except in testing the meter. The dials below are marked tens, hundreds, thousands, etc., according to what they record. The lowest figure when the hand is between two, should be taken; thus: if the dial marked "100 thousand" has the hand between 5 and 6, that marked "10 thousand" between 0 and 9, that marked "thousands" at 8, the reading would be 598,000. If sometime after the "100 thousand" hand is between 7 and 8, the "10 thousand" at 2, and the "thousand" between 0 and 1, the reading is 720,000, and the difference between these figures, or 122,000 feet, have passed through the meter. Householders may easily verify the accuracy of their gas bills by consulting their meter at stated intervals.

MICE.—A good cat is the best remedy for these nuisances, and will generally clean the house of them in a short time. A turtle in the cellar is said to keep it clear of mice and rats, probably by some odor disagreeable to them. We do not vouch for the statement. Many poisons for them are sold in the shops, the best of which is the phosphorus paste; but equal quantities of hemlock and old cheese, or of arsenic and meal, are as good as anything else. The objection to using poison is that it renders the house liable to a bad smell; but this evil may be lessened by placing a dish containing oil of vitriol poured on saltpetre, or chloride of lime and water, where the smell is most annoying.

MIGNONETTE.—One of the most popular of the hardy annuals. It will thrive in any good garden soil and requires no care; and where this plant has once grown well it will come up year after year from self-sown seed. Sow late in the autumn and it will come up early the next spring and bloom profusely all summer. The flowers of the common variety are a greenish white, and of exquisite fragrance. Parson's new white, and the crimson flowered, are choice novelties.

MILDEW.—This is one of the most difficult of stains to remove, and cannot be removed at all unless it is attacked early. Mix soft soap with powdered starch, half as much salt, and the juice of a lemon; spread this mixture on both sides of the mildewed cloth. Let it lie on the grass day and night till the stain comes out, renewing the application two or three times a day.

Salt wet with tomato-juice will sometimes extract the stain. Spread the cloth on the grass in the sun as before.

MILK.—This is one of the most important foods which nature has supplied for the use of man, since it contains all the elements of nutrition within itself, and in the most digestible form; and there is no other, perhaps, which is found in such universal use throughout the world. Cow's milk, which is the only kind of which we shall treat here, is the most agreeable of any; and even for infants is superior to any other except the human milk. (*See* INFANTS.) Its quality depends very largely upon the breed of the cow—some breeds give milk much richer in cream than others—and

also upon the treatment which the cow receives. (*See* Cow.) Scarcely less important is the management of the milk itself, after it is drawn from the cow, and too much care cannot be bestowed upon this point. (*See* Dairy.)

Milk from a farm where typhoid fever exists is one of the most prolific sources of the spread of that disease. In hot weather milk may be kept sweet by scalding it very gently, without boiling; also by putting a spoonful of scraped horse-radish into each pan of milk, which will keep it sweet for several days. Cream may be kept for twenty-four hours by scalding it; and, if sweetened with pounded loaf-sugar, it may be kept two days. Certain kinds of food affect the flavor of milk; turnips, for instance, impart a flavor which is very disagreeable. This flavor may be removed by dissolving a pound of saltpetre in a gallon of boiling water, and adding a half pint of this solution to every four gallons of milk as it comes from the cow.

The adulteration of milk, as sold in the cities, has always been considered to be very great—that is, it has been believed that not only water, but various other ingredients are added in great quantities. Recent analyses in several of the cities seem to prove that this is a fallacy; and that while water is added in numerous instances, it is extremely seldom that even chalk or starch has been used for adulteration, while of other substances there are practically none. Starch is said to be sometimes added to conceal the blue color produced by the addition of water; it is easily detected by the violet-blue color formed when the milk is brought in contact with a drop of tincture of iodine. Chalk is added occasionally to neutralize the acidity in sour milk, and also to give it thickness and body. When this is the case, the deposit left by the milk, after standing some time, if washed and dissolved in acetic acid (*vinegar*) will effervesce. A more common fraud than any, probably, consists in removing the cream; but this can usually be told merely by tasting.

Condensed Milk is simply milk boiled till all the water is extracted from the other ingredients, with the addition of a certain proportion of sugar. Dilution with water brings it back nearly to its original condition. This milk has several advantages over the fresh in cities,—one of which is that it is certainly pure. (*See* Butter, Buttermilk, Cheese, Cream, and Dairy.)

MILKING. (*See* Cow.)

MILK-WEED. — An extensive family of plants, known also as "milk-vetch," growing wild in many portions of the country, the young shoots of which, when about four to six inches high, make excellent and tender greens. Even after the young leaves become detached from the stalk and begin to mature, they are good. When sold in the market, the young milk-weed is usually tied up like asparagus, in bunches; but the stalks are shorter, and of a lighter color. It is best in May, and that which grows in the shade is most tender and sweet. Cook and stew like any other vegetable used for greens.

MILLET.—The smallest seeded of the corn plants, being a true grass, but the number of seeds in an ear makes up for the diminutive size. There are numerous varieties of the millet which are cultivated as food in different parts of the world. The *common millet* is the kind usually grown here (when it is cultivated at all), and of this there are two kinds, the brown and the yellow. The first is sometimes used as a substitute for sago and rice, and it makes very good puddings. A yellow variety of the *Italian millet*, called "golden-cloud millet," is sold in the grocers' shops for making puddings, and is very delicate and wholesome.

MINCEMEAT.—I. *Take:*—Beef-tongue, or inside of roasted sirloin, 1 lb; beef kidney-suet, 2 lbs; stoned raisins and minced apples, each 2 lbs; currants, 2½ lbs; fine sugar, 2½ lbs; candied orange, lemon, or citron peel, 8 to 16 oz; lemons, 2; peel of 2 others grated; salt, ½ oz; nutmegs, 2; pounded mace, 1 teaspoonful; ground ginger, rather more than 1 teaspoonful; sherry or Madeira, ½ pt; brandy, ½ pt.

Boil the tongue (*without salt*) until quite tender and cut free from the rind; or if the sirloin be used cut it from the inside of a well-roasted joint. Boil the two lemons whole until quite tender, and then chop them up entirely, with the exception of the pips. Mince each of the above ingredients separately, and all well together before the wine and brandy are added.

After the mincemeat is mixed thoroughly, press it into a jar or jars, and keep it closely covered; it should be stored for a few days before it is used, and will remain good all winter. Some persons like a slight flavoring of cloves in addition to the other spices; others add the juice of two lemons, and a larger quantity of brandy. Minor changes such as these can be made to suit individual tastes

II. *Take:*—Lean beef (*boiled*), 2 lbs; beef-suet, 1 lb; apples, 5 lbs; seeded raisins, 2 lbs; sultana raisins, 1 lb; currants, 2 lbs; citron, ¾ lb; pounded mace, 2 tablespoonfuls; pounded cinnamon, 2 tablespoonfuls; nutmeg, grated, 1; cloves, and allspice, 1 tablespoonful each; brown sugar, 2½ lbs; sherry, 1 qt; brandy, 1 pt.

Wash the currants and raisins and pick them out carefully; pare and core the apples; mince these, together with the beef and suet, separately; and mix all together thoroughly before adding the sherry and brandy. This may be kept, as in preceding recipe, all winter.

III. *Take:*—Beef-suet, 2 lbs; currants, 2 lbs; raisins, seeded, 1 lb; bread, 2 oz; brown sugar, 1¼ lbs; red and white wine, mixed, 3 gills; lemons, peel of 2 and juice of 1; candied orange-peel, 4 oz; cinnamon, mace, nutmeg, and salt, to taste.

Prepare and mix as above. If preferred, two biscuits may be substituted for the two ounces of bread.

Mock Mincemeat.—*Take:*—Raisins, 1 teacupful; currants, 1 teacupful; molasses, brown

sugar, and sour cider each, 1 teacupful; cold water, 2 teacupfuls; melted butter, 1½ teacupfuls; eggs, beaten, 2; soda-crackers, rolled fine, 6; cinnamon and allspice mixed, 1 tablespoonful; salt, pepper, nutmeg, and cloves, each, 1 tablespoonful; brandy, 1 wineglassful.

Prepare and mix as above. Boiled cider or the syrup from sweet pickles may be used for mince pies, instead of wine or brandy.

MINT. — The common mint, sometimes called "spearmint" or "green mint," is what is generally meant by mint, though pennyroyal and peppermint are members of the same family. The young leaves of from one to six inches in length are the parts used. Mint will grow in any sort of garden soil and in any situation, but a warm, sunny spot will bring it forward earlier. It is very prolific, and a bed six feet long and two feet wide will produce a large quantity. It is best propagated by cuttings, or by dividing the roots of an old plant. Early spring is the best time for this; though it may be done at any time by shading and watering during the first few days. Those who have conservatories or frames should keep a root or twig of mint in pots, as it is in demand for lamb very early in the year, before it puts forth its leaves in the open air. In drying mint, cut the stalks just before the plant is in full flower, and spread them out thinly in some dry, shady place, where they can dry slowly. When of sufficient crispness, put it in paper bags (this is better than laying up in bunches), and keep in a dry place till wanted. (*See* SAUCES.)

MINT JULEP. (*See* JULEP.)

MIRRORS. (To Clean.)—Remove the fly stains and other spots with a damp rag; then polish with a dry woollen cloth and powder-blue. *Or*, take a clean piece of sponge, well washed out in water, and dip it into methylated spirits of wine; rub it rapidly over the glass; put over it powder-blue, or the finest sifted whiting; rub it off with a clean linen cloth, and polish with soft leather or an old silk handkerchief.

MOCKING-BIRD. — This bird takes its name from its remarkable powers of voice, being able to imitate the notes of nearly every other species of bird, and of many animals, as well as noises that are artificially produced. Nor are its notes entirely imitative; its own song is bold, full, and exceedingly varied; and in confinement it loses little of its energy. It is a native of the Southern States, whence those found in our bird-fanciers' shops are brought. Only the males sing, and these may be distinguished by the markings of the wings. When these are opened, if the bird be a male, two distinct bands of white may be traced entirely across them, and the central feather in each wing is nearly or quite white. These markings are absent in the females.

Mocking-birds require much larger cages than the canary, and in a northern climate must be carefully sheltered in winter and at night. The best food for them is a mixture of boiled white potatoes and boiled yolk of egg (two parts of potato to one of egg) mashed together. They also require a liberal supply of earth worms, grasshoppers, and an occasional sprig of green vegetables, together with berries in their season. The care of the cage is described in article on BIRD-CAGE.

The mocking-bird is much superior to the canary as a songster, with a greater variety of notes, and a more brilliant execution; and can be taught to whistle a variety of tunes perfectly, even when these are of considerable length. In buying, select a young bird, as it can be taught more easily, and is less likely to suffer from change of residence and diet.

MODERATEUR LAMP. (*See* CARCEL.)

MOHAIR.—A kind of cloth made of the hair of the Angora goat, and suitable for paletots, etc. Mohair dresses were much worn by ladies a few years ago, but they have been superseded lately by alpaca cloths and other similar materials. Mohair is manufactured in France, England, and Scotland; the French is the best. It comes in pieces three-quarters of a yard, a yard, and a yard and a half wide.

MOLASSES.—This term is commonly applied to all the syrups produced in the manufacture of sugar, but properly speaking it means only that brown viscid syrup which includes those portions of the saccharine juice that are uncrystallizable, either naturally, or rendered so by defects in the process of boiling. It contains a large proportion of the sweet or saccharine principle of the sugar-cane juice, and this, combined with its cheapness, renders it a useful article of domestic economy. It is considered very wholesome, and children are generally fond of it. Molasses may be deprived of its peculiar rank taste by boiling it for half an hour with a little pulverized charcoal; after straining it from the charcoal the flavor of the liquor will be found equal to that of sugar. The syrups which remain after the sugar has passed through the process of refining are generally known as *treacle*. In buying molasses, reject the very dark, and choose that which is clear and smooth.

MOLASSES CANDY. (*See* CANDY.)

MOOSE.—This animal is also known as the "moose-deer," and its flesh may properly be called *moose-venison*. It is very scarce, but is sometimes found in the winter time in New York and Boston, and the more northern markets. The meat is not so inviting to the eye as the common venison, being coarse, dry, dark, and tough-looking; but sportsmen say it is excellent food, and more nutritious than any other. The tongue is considered a delicacy, and so is the *moufle* (the large, gristly extremity of the nose). Prepare, cook and serve like Venison.

MOREEN.—A very stout woollen stuff, made for furniture and chiefly for window-curtains. It is manufactured either plain or watered. Some moreen is of a very nice quality, resembling silk damask in appearance; but it may also be had at very low prices. Usual width, ¾ yard.

MORPHINE. — Poison. *Treatment, see* Opium. A vegetable alkaloid made from opium. It is a powerful anodyne and sedative, and is much used in medicine, either in the form of hydrochlorate, acetate, sulphate, or citrate; the first-named being used most frequently. The best preparation of it is what is known as *Magendie's Solution.* Morphine is a deadly poison when taken in overdoses, and its use is attended with such danger under any circumstances that it should never be taken except by and in accordance with medical advice. In subcutaneons injections of morphine, be sure to have *Magendie's Solution* without acid, fresh and clear, or an abscess will result. There is danger of forming a morphine or an opium habit, as bad as the alcohol habit. Moreover the patient may be under the influence of opium so as to be really irresponsible, and yet his condition not apparent to companions. In such a state, there is great danger of his seeking the drug and taking a poisonous dose; it should therefore be kept out of his reach. In the so-called "reaction" from excessive doses of opium, the suicidal mania is apt to come, so the patient should be watched, even for three or four days after the effects of the drug appear to be entirely gone. After it has been necessary to give heavy doses of opium, it should not be stopped off suddenly, but the dose should be continued though gradually but inexorably lessened at the rate of about one-third per day. Opium is probably the most powerful stimulant known, and the effects of its sudden withdrawal are more painful than those of even alcohol.

MORTAR. (*See* Wedgewood mortar.)

MOSELLE WINES.—These wines are made in the valley of the Moselle (Germany), and are usually classified with the Rhine wines, though they are much inferior to the better qualities of the latter. They are also lighter and less spirituous, and of rather thin body; but they are noted for an agreeable aromatic flavor, which, however, is said to be generally imparted to the wine by mixing with it tincture of elder-flowers. The better sorts of Moselle are highly esteemed in Germany for their supposed medicinal properties; they are believed to be not only generous and stimulating but slightly laxative.

The most celebrated brands are the *Branneberger*, and *Scharzberger;* and scarcely less esteemed are the *Zeltigner*, *Graachen*, *Dun*, *Josephshoff*, *Berncastle*, *Grunhausen*, *Schargh-hoffberger*, and *Piesporter Auslese.* By a process similar to that by which champagne is made, large quantities of *sparkling Moselle* are manufactured, which resembles champagne in taste, and by means of false labels is sold as such. It is never a pure and good wine.

Moselle is essentially a summer wine, and should be drunk cooled.

MOSQUITOES.—The only sure protection against these troublesome little insects is to have nets at the windows, so as to keep them out of the room, or, failing this, to have close nets around the bed. The fumes of camphor are supposed to be disagreeable to them, and in the absence of the nets may be applied to the face; but whatever effect it has is only temporary. Spirits of ammonia (hartshorn) is the best antidote for their bites; salt and water is good.

MOSS, ICELAND. (*See* Lichens.)

MOTHS.—Many persons suppose that moths are produced in clothes that are laid by, merely by their being shut up in closed places; but this is an error. The moths themselves are quite harmless, and it is only in their larva or maggot state that they feed upon the woollen fabric. None of these larvæ ever appear among clothes or articles of any kind, provided none of the winged moths can have access to them to lay their eggs; therefore, by preventing the winged moths from obtaining access to what you wish to preserve, no injury by moths can possibly happen to them. By tying up any article that is free from moths in paper, calico, or linen so tightly that the winged moths cannot penetrate it, it may be kept secure. But it is to be observed that the moth is very cunning, and unless the enfolding has been very careful they will effect an entrance. Camphor, cedar-wood, pepper and Russia-leather will, to a certain extent, repel their advances; but neither of them can be relied on, and the above precaution is all that is necessary.

Should any woollen articles appear to be attacked by moths, beating and brushing, and exposure to the sun should be resorted to at once. They should then be hung in a closet or wardrobe in which an open vessel containing spirits of turpentine has been placed; this will effectually destroy all the larvæ. (*See* Carpets.)

MOULD.—Mouldiness is caused by the growth of minute vegetation. Ink, paste, leather, and seeds most frequently suffer from it. A clove, or a few drops of any essential oil, will preserve ink. Leather may be preserved by the same substances; thus, Russia-leather, which is perfumed with tar of birch, not only never becomes mouldy but prevents its occurring in other bodies. A few drops of essential oil put in the box in which they are packed will keep books entirely free from mould. For harness, oil of turpentine is good. Alum and resin are used to preserve bookbinders'-paste, but ineffectually; oil of turpentine (three or four drops to a quart) succeeds better, but by small quantities of oil of peppermint, anise, or cassia, paste has been preserved for several years. Seeds may also be preserved by putting a few drops of any of the essential oils on the paper or cloth in which they are enclosed; and this is of great consequence when they are sent to a distance. Of course moisture must be excluded as much as possible, as the oils prevent the bad effects of mould only.

Iron-mould is in reality a stain from rust, and is as nearly ineradicable as stain can be. By moistening the part with ink, and, while this is wet, rubbing it with muriatic acid diluted with five times its weight of water, both stains may sometimes be removed together.

MUCILAGE.—A solution of gum in water, used in medicine, and as a paste in many household processes. Mucilage of gum-arabic is best for these latter purposes. Dissolve gum-arabic (the best is nearly colorless) in either hot or cold water till the whole is of the consistency of cream, and keep it as much as possible from contact with the air. Add a few drops of any essential oil, to prevent its souring. About 30 drops of syrupy glycerine to a pint of mucilage will prevent its cracking when dry, or making labels curl.

MUFFINS.—*Take:*—Flour, 3 pts; milk, 1½ pts; yeast, ½ teacupful; eggs, 2; melted butter, 4 tablespoonfuls; salt, 1 teaspoonful.

Heat the milk till lukewarm, and then mix in the flour; beat the eggs, and add them with the other ingredients. Set the batter to rise in a warm place; when light, butter the muffin rings, turn in the mixture, and bake on a griddle not too hot, till the muffins are of a light brown. Serve hot.

Bread Muffins.—*Take:*—Raised bread, 4 thick slices; flour, two tablespoonfuls; milk, ½ pt; eggs, 3.

Cut all the crust off the slices of bread, put them in a pan and pour enough boiling water over them to soak them well; cover it over and let it stand an hour.

Then drain off the water, and stir the soaked bread till it is a smooth paste; stir in the flour and the milk; and add the eggs, after having beaten them very light. Butter the muffin-rings, fill them with the mixture, and bake brown. These muffins, if properly made, are very light and nice.

Hominy Muffins.—*Take:*—Small hominy, boiled, two cupfuls; milk, two cupfuls; melted butter, ½ cupful; salt, 2 even teaspoonfuls; sugar, two tablespoonfuls; flour, 1½ cupfuls; baking powder, 2 teaspoonfuls; eggs 3.

Sift the baking powder with the flour; and beat in a little of the milk, and all the eggs, butter, salt, sugar and hominy, which should be warm to mix well; add the rest of the milk; bake in a quick oven in muffin rings placed in a dripping-pan.

Rice Muffins.—*Take:*—Boiled rice, ½ pt; flour, 1½ pts; milk, 1 pt; butter (or lard), 1 gill; salt, 1 teaspoonful; baking powder, 4 even teaspoonfuls.

Beat the butter, salt and eggs into the warm rice; add the flour, with which the baking powder has been sifted, and the milk; bake as above.

Corn Muffins.—Pour a pint of scalding milk on three gills of corn meal; add two tablespoonfuls of melted butter and half a teaspoonful of salt; stir in two well beaten eggs, and one pint and one tablespoonful of flour, which has been sifted with two even tablespoonfuls of baking-powder. Bake about an hour.

Graham Muffins may be made by substituting unbolted flour or Indian meal in the above receipt. Use cold milk.

MULBERRY.—The red mulberry is the best. It has an agreeable acid, sugary taste. Black mulberries are larger and sweeter, but are slightly insipid. The white variety is smaller than either, and in flavor resembles the black. Mulberries begin to ripen about the 1st of August. When used for dessert, they should be freshly gathered, and so ripe as to fall from the trees when slightly shaken. Boiling black mulberries in a little water till of the consistency of cream makes a syrup which is good for sore throat.

Cider (Mulberry).—Press the juice from ripe mulberries; mix it with an equal quantity of apple-juice; and proceed as in making cider.

MULCH.—Half-rotten matting, straw, leaves, etc., strewn around the roots of plants to protect them from unfavorable weather. When completely rotted, it makes an excellent manure.

MULLED DRINKS (Cider).—Take of bruised stick cinnamon about ¼ oz; half a grated nutmeg; 10 or 12 bruised cloves; infuse in half a pint of boiling water for an hour; strain the liquid, add sugar to the taste, and pour it into a pint of hot cider.

Claret.—Boil the sugar and spice as above for a few minutes in just enough wine for the purpose; then add the remainder and boil as above for a second or two.

Port.—Boil any of the spices (cloves, cinnamon, nutmeg or mace) in half a pint of water, with three ounces of sugar; after it has boiled five minutes or so, add from six to twelve wineglassfuls of rich port wine; let it boil up once and pour out into the vessel in which it is to be served. If desired, the water can be drained off from the spices before the wine is added to it; and lemon or orange juice added.

Any other wine, and either ale or porter, may be "mulled" like claret in the same way; it is a very pleasant drink for winter.

MULLET.—There are several varieties of the mullet, among which the *striped mullet* is most plentiful. It is in season from September to May, and is usually very fat; but it has a rather unpleasant flavor, and is not much esteemed for the table. The *golden mullet*, or mullet-sucker, is a beautiful fresh water fish, in season during the winter and spring months. The flesh is sweet, but rather dry, and quite full of small bones. The *plain red mullet* is abundant in summer, and may be had throughout the year. The *white* or *gray mullet* is also very fine.

Prepare, cook, and serve white mullet as directed for fresh mackerel.

Baked, Broiled, or Roast Red Mullet.—

First wash and then dry the fish thoroughly in a cloth; neither scale nor open it, but take out the gills gently and carefully with the small intestine which will adhere to them; wrap it closely in a sheet of thickly buttered paper, tie this securely at the ends and over the mullet with pack-thread, and bake it in a moderate oven; broil it over a clear but not too hot fire,

Red Mullet.

or roast it in a Dutch oven: from twenty to twenty-five minutes will generally be sufficient to dress it in either way. For sauce, add a little melted butter to the liquor which has flowed from the fish, a dessert-spoonful of essence of anchovies, some cayenne, a little lemon-juice, and (if desired) a wineglassful of port or claret. Remove the pack-thread and send the mullet to table in the paper wrapping; or remove the paper and dish with the sauce.

MULLAGATAWNY.—Disjoint a rabbit, cut the back into 6 pieces; slice 1½ lbs beef, thin. Place in a *sautoir* 6 onions sliced, and 3 ozs butter; when brown remove into a stew-pan; in the butter brown the rabbit and beef; put into the bottom of a soup-pot 4 slices of raw ham; lay in the rabbit and beef, the onions, 2 sour apples grated, and rind of ½ lemon. Now in the *sautoir* put 2 ozs butter, 2 ozs flour, 3 tablespoonfuls of curry-powder, 1 large teaspoonful salt; stir with a wooden spoon 2 minutes; add 2 qts of boiling stock with which the *sautoir* has been rinsed out, and ½ pint white wine; simmer 1½ hours, skim clean; when ready pour into tureen; serve with rice. (*See* under SOUP.)

MUMPS.—A swelling of the glands about the throat. This curious disease makes its appearance usually in the spring, and young persons of both sexes are much more liable to be attacked by it than those farther advanced in life. It commences with a feeling of pain and tension beneath the ear, swelling soon develops, and as the disease progresses the least motion of the jaw becomes extremely painful. Sometimes only one side is affected, sometimes both at once, more commonly one after the other. The disease is accompanied by fever, usually very slight, but occasionally more serious. About the fourth day from the commencement of the swelling, the disease is at its height. A gentle moisture then begins to exude from the surface of the swelling, accompanied with a general perspiration of the whole body, which, if it be encouraged by keeping warm in bed and drinking diluent fluids, seems to form the natural crisis of the disease, which begins to decline and usually disappears about the eighth day.

If, however, by exposure to cold or imprudent management, this natural process of the disease is interrupted, the tumors about the throat suddenly subside and are followed by swellings of the testicles in males and of the breasts in females, accompanied with increased fever.

Treatment.—In ordinary cases very little treatment is required beyond the administering of a mild laxative and the application of warm poultices to the parts affected. But great precautions must be taken against taking cold, especially if the swelling is transferred from the throat to the testicles or breast. During the first day or two of the disease it is well to encourage the swelling by rubbing the parts gently with some volatile liniment; and for the same reason, the parts may be covered with soft flannel. Should the swelling suddenly subside and any tendency to delirium manifest itself, a physician should be summoned at once.

Mumps are epidemic, and are generally believed to be contagious.

MUSCADINE.—A very large, sweet, and spicy grape, which grows in great abundance throughout several of the Southern States. The skin is very thick and tough, and the pulp has a spicy flavor which is extremely pleasant. No cultivated grape approaches the muscadine in size; it is generally twice as large as the largest Delaware or Concord. Muscadines ripen in August. Wine is made from them in the same way as from other grapes.

MUSH.—Take a pint of Indian meal, wet it up with cold water, and stir it into two quarts of cold water, salting to taste. Boil two hours stirring often with a wooden spoon or stick, and then remove from the fire. This may be eaten with butter simply, or with milk and sugar, and is very good for the sickroom or the nursery. Graham meal may be substituted for the Indian if liked.

MUSHROOM.—The mushroom is considered by many one of the greatest delicacies known to our tables, and its richness in nitrogenous elements renders it one of the most nutritious of all the edible vegetables; but there are a variety of poisonous fungi which so closely resemble mushrooms in appearance that no one should venture to eat of the latter without knowing with certainty how to select the proper kind. Edible mushrooms are most plentiful in August and September, and spring up in the open fields after low-lying fogs or heavy dews; in looking for them avoid low, damp, shady spots. The young button (as it is generally called) has the top or cap quite white, while the gills or under part are loose, and of a light red or flesh color; as it increases in size and age, the top changes to a tawny or brown color, and looks scurvy, and the gills change to a darker red or black. The stem is also white and round, and turns dark with age. The upper skin of the mushroom peels off readily; that of the poisonous fungus does not. The button is sometimes found perfectly round, and when smooth and white is the best kind of mushroom. Every edible mushroom has a

decidedly pleasant odor, and is never shiny; while those which are dangerous either have a bad odor or none at all. By those however who are not already skilled in detecting the characteristics of mushrooms still further tests should be applied. For instance, sprinkle salt on the spongy part or gill of the mushrooms to be tried; if they turn yellow they are poisonous; but if they turn black they are good. Allow the salt to act a little time before deciding as to the color produced. Another simple and efficient test is to cook a peeled white onion in the pot with the mushrooms; if it turns black, the mushrooms are poisonous and should be thrown away. It is also deemed prudent to reject mushrooms when a silver spoon used in stirring them turns black.

In case of suspected poisoning by spurious mushrooms, take a liberal dose of the emetic nearest to hand. After the stomach has settled, take from one to three tablespoonfuls of castor-oil.

Baked Mushrooms.—Select large ones; trim the stalks, remove skins with a damp cloth. Place them on oval crôutons; put them into a baking-pan; season with salt, white pepper, lemon juice, and chopped parsley. Cook in a hot oven 5 or 6 minutes, basting them often with rich hot gravy in which a lump of butter has been melted. Arrange the crôutons on their dish, and pour over them the gravy. Serve sauce *à la Maître d'Hotel* in a tureen.

Broiled Mushrooms.—Large ones are best for this purpose. Peel off the upper skin, and lay them, with the gills upward, on the gridiron; sprinkle them with salt and pepper, and drop little bits of butter over them here and there. Broil them over a hot, clear fire, turning them over when browned on one side; serve hot.

Catsup (Mushroom.) (*See* CATSUP.)

Dried Mushrooms.—Peel small, sound, freshly-gathered mushrooms, cut off the stems, and scrape off the fur entirely; then arrange them singly on tins or dishes, and dry them as gradually as possible in a gentle oven. When they are dry, put them into tin canisters, and store them where they will be secure from damp. When wanted for table, they should be put into cold gravy, slowly heated, and gently simmered until they are tender.

Pickled Mushrooms.—Select the smallest buttons of the *meadow* mushrooms, and let them be as freshly gathered as possible. Cut the stems off quite close, and clean them with a bit of new flannel slightly moistened, and dipped into fine salt; throw them as they are done into plenty of spring-water, mixed with a large spoonful of salt, but drain them from it quickly afterwards, and lay them into a soft cloth to dry, or the moisture which hangs about them will too much weaken the pickle. For each quart of the mushrooms thus prepared, take *nearly* a quart of the palest white wine vinegar (this is far superior to the distilled vinegar generally used for the purpose, and the variation in the color of the mushrooms will be slight), and add to it a heaped teaspoonful of salt, half an ounce of whole white pepper, an ounce of ginger, sliced or slightly bruised, about the fourth of a saltspoonful of cayenne tied in a small bit of muslin, and two large blades of mace: to these may be added half a small nutmeg, sliced, but too much spice will entirely overpower the fine natural flavor of the mushrooms. When the pickle boils, throw them in, and boil them in it over a clear fire moderately fast from six to nine minutes, or somewhat longer, should they *not* be very small. When they are much disproportioned in size, the larger ones should have two minutes boil before the others are thrown into the vinegar. As soon as they are tolerably tender, put them at once into small stone jars, or into *warm* wide-necked bottles, and divide the spice equally amongst them. The following day, or as soon as they are perfectly cold, secure them from the air with large corks, or tie skins and paper over them. They should be stored in a dry place, and guarded from severe frost. When the color of the mushrooms is more considered than the excellence of the pickle, the distilled vinegar can be used for it.

Sweetbreads and Mushrooms.—Take equal quantities of sweetbreads and mushrooms; put into a sauce-pan and barely cover the mushrooms with water; cover the sauce-pan, and stew half an hour; take them from the water, lay in the sweetbreads and stew fifteen minutes. When both are cool, cut them into pieces the size of grains of mocha coffee; stew a few minutes in a little cream; season with white pepper, salt, and mace, if liked; dredge in a little flour, to make the cream barely thick enough to keep the whole together in a soft mass. Serve hot, in paper cases, on a napkin.

Powder (Mushroom).—Take dried mushrooms (prepared as above) and pound them to a very fine powder; sift it, and put it immediately into small and *perfectly dry* bottles; cork and seal them without delay, for if the powder be long exposed to the air so as to imbibe any humidity, or if it be not well secured from it in the bottles, it will become putrid. This is an excellent addition to many dishes and sauces. A teaspoonful of it, with a quarter of a pint of strong veal gravy, as much cream, and a small dessert spoonful of flour, will made a good *béchamel* or white sauce.

Stewed Mushrooms.—I. Peel, and trim the stalks; place in a stew-pan with half the juice of a lemon, white pepper and salt to taste, a *very* little scraped garlic, and 1 oz of butter; cover close, and stew for 5 minutes, add béchamêl, allemande, or velouté sauce to just cover; boil up once and serve.

II.—Peel, trim the stalks, and cut through and down the stalk into 3 or 4 slices. Place in a stew-pan in which a small shallot has been minced and fried in 2 oz of butter, with white pepper and salt to taste. Pass over the fire a few minutes, then add enough Espagnole or cullis to cover; simmer 1 minute, add a small glass of red wine, and serve.

MUSK.—A highly odorous substance found

in the *musk-deer*, an animal which is a native of Thibet, China, and Siberia. A variety of musk is also found in the musk-rat of Canada. Musk is of a bitter taste, and has a more powerful scent than any substance known; other substances in its neighborhood become strongly infected by it, and when once perfumed retain the scent for a long time. It also has the property, when employed in very small quantities, of augmenting the scent of other substances without imparting its own. The best musk comes from China; and to have it genuine it should be purchased in the natural bag, or pod, as it is very often adulterated. The Bengal musk is inferior, and that from Russia the worst of all. The hair on the pod of the best musk is a fawn color, and on the inferior a dirty white. When musk is bought otherwise than in the pod, draw a silken thread two or three times through a clove of moist garlic, and then through the musk; the latter, if genuine, will instantly overcome the odor of the garlic. To preserve musk well, keep it perfectly dry; and when it is to be used as a perfume, moisten it.

MUSK-MELON. — The varieties of this melon are very numerous, some of them being distinguished by a thick and warty rind, some by a rind cracked in a net-like manner, some by ribs and furrows, and others by a perfectly smooth and thin rind. They differ also in the color of the *flesh* of the fruit, which is green, yellow, and red; and in size, which varies from three or four inches to a foot in diameter. The choicest varieties are the *citron*, *cantaloupe*, *nutmeg*, and *pineapple*. Of these, the *citron* is most valued for its sweetness, richness, and high flavor. They appear in the Southern markets (whence they are shipped North) about the first of August, and are distinguished by their small size and comparatively smooth rind. The *nutmeg* is preferred by most people for its high musky flavor and large size, and the skin appears as if covered with a net, ribbed or crossed like the nutmeg spice. They are in season in July and August, and are among the most extensively cultivated of the varieties. The *cantaloupe* is the first ripe musk-melon but is less cultivated than the former. It has a sweet and pleasant flavor. Most musk-melons when ripe have a decided yellowish tinge, but this test is not always conclusive.

MUSK-RAT. — This animal is sometimes seen in the Northern markets, but is not often eaten, more on account of its name probably than anything else, for its flesh is both tender and well flavored. If it can be hung and frozen a few days it is considered still better. Prepare, cook, and serve like Rabbit.

MUSLIN.—A fine, thin, flimsy sort of cotton cloth, which has a fine warp on its surface. There are numberless varieties of muslin, it being manufactured in nearly every country of the world. The best is the Indian muslin, which has a special reputation for durability, and for retaining its whiteness; and the Swiss muslin ranks next. But the English and American muslins are scarcely inferior, and serve admirably for all purposes for which the cloth can be used. Muslin comes of different widths, but the customary one is a yard; it should be carefully shrunk before being cut into garments.

MUSSELS.—These shell-fish are not highly esteemed as food, being tough of texture, hard to digest, and consequently *not* agreeing with many stomachs. They may be obtained in the markets, however, though not in great quantities, and are best during the fall and winter months. Boiling and pickling them are the best methods of preparing them. Choose such as are large in the shell, plump in the flesh, and brilliant orange in hue.

Boiled Mussels.—Put the mussels into a large tin sauce-pan without water, and with the lid on. Set it over a brisk fire; the mussels at the bottom will immediately let out enough liquor to keep them from burning. As soon as they begin to warm shake or "hustle" the sauce-pan so as to bring the bottom over the top; and so on till all the mussels have felt the influence of the heat. When they open they are done; too much cooked they are spoiled. Pour them, with their hot liquor over them, into a bowl or deep dish, and serve immediately.

Pickled Mussels.—Boil them as above, and when done, pick out the mussels with a fork and put them into a common preserve-jar, dusting pepper over them from time to time. When the liquor which comes from them has settled, pour over the mussels a mixture of half liquor and half vinegar. They will then keep several days. If not for early use, they should be pickled in pure vinegar with plenty of spice. Tie them down close with bladder or thick paper.

MUSTARD.—The pulverized seed of the mustard-plant. There are two varieties of mustard, the black and the white, both of which are cultivated in our gardens. The seeds should be sown in the early spring, in rows about two feet apart; they grow very rapidly, and flower in June, shortly after which the seeds appear. The leaves of the young, white, hood-leafed mustard are excellent for salad, or to boil with meat as greens; they may be had at any time in a few days by sowing the seed in a box and keeping it in a warm place. The seed-vessels of the black mustard are smooth, those of the white rough and hairy. The seeds of the former are small, of a dark brown color, inodorous when whole, but when powdered and mixed with water have a strong, penetrating odor, and a sharp, burning taste; those of the latter are larger, of a yellow color, and less pungent taste. The flavor of mustard is obtained by crushing and sifting both kinds of seeds, which are usually mixed for this purpose.

The adulteration of mustard is well-nigh universal, wheaten flour being added and turmeric to give the proper color to the mixture. The adulterations, however, are only of importance

as far as the money-value is concerned, as the turmeric is innocent of any mischievous qualities. In purchasing mustard there is no guide short of the microscope but the palate, as the full strength is not developed until the flour is mixed with hot water. Most people can judge of the strength when used, and this will serve as a guide in future purchases.

The art of mixing mustard is to have it perfectly smooth and of the proper consistency. The liquid with which it is moistened should be added to it in small quantities, and the mustard should be well rubbed and beaten with a spoon. Mix half a teaspoonful of salt with two ounces of the flour of mustard, and stir to them by degrees sufficient water to reduce the whole to the consistency of a thick batter; do not put it into the mustard-glass until cold. It ought always to be sufficiently diluted to drop easily from the spoon. Some persons like half a teaspoonful of sugar in the finest powder added to the above mixture.

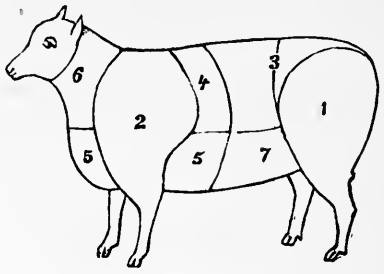
Mustard for instant use should be mixed with milk, to which a spoonful or two of very thin cream should be added.

Tartar Mustard.—Rub four ounces of mustard very smooth with a teaspoonful of salt, and wet it by degrees with strong horseradish vinegar, a dessert spoonful of cayenne, or of Chili vinegar, and one or two of tarragon vinegar. A quarter of a pint of vinegar poured boiling upon an ounce of scraped horseradish, and left for one night, closely covered, will be ready to use for this mustard, but it will be better for standing two or three days.

MUTTON.—The name given to the flesh of sheep when slaughtered and dressed. The age of the animal producing the best mutton appears to be between three and five years. When younger than three years, it is usually tender; but has not so much flavor and juiciness as that which is older and more fully developed. The quality of mutton depends also to a great extent on breeds and feeding. A large-framed, coarse-woolled, fat sheep produces a coarse-grained, dry, and poorly-flavored mutton; while the short-woolled, round, plump, and thick sheep (such as the Southdown, Leicester, Cotswold, etc.) yield the close-grained, tender, juicy, and highly-flavored mutton—especially when allowed to graze on the short, sweet grass of hills and mountains, with the addition of proper stall-feeding afterwards.

The sheep is usually butchered as shown in the accompanying cut; and the following are the names of the principal pieces:—

The joint which contains the least proportion of fat is the leg, and next to that the shoulder, whilst the loin, neck and breast have the largest proportion. The least proportion of bone to meat is found in the leg, and on this account as well as the comparative absence of fat, it must be regarded as the most useful joint in the sheep and justifies the higher price demanded for it. The neck has the greatest proportion of bone, with a large proportion of fat, and is not so economical as its price would seem to indicate. The most solid meat is the leg, and the least the shoulder and breast. The latter has the further disadvantage of having more fat than lean, whilst the lean is not easily masticated and has but little flavor. It is sold at a lower price, however, than any other joint of mutton, and may be made into a variety of economical and serviceable dishes.



Carcass of Sheep.

1. Leg of mutton.
2. Shoulder of mutton.
3. Loin of "
4 and 6. Neck of mutton.
5. Breast of mutton.
6. Scrag of mutton (end of neck).
7. Flank of "

To secure the best mutton, choose that in which the lean is firm, juicy, of a darkish red color, and finely-grained; and the fat white, clear, and hard. When the latter is yellow, the meat is rank and of a bad quality. If the animal is diseased, or has been driven a long way, the flesh will be flabby, the kidney-fat small, with a stringy appearance, and the lean seen through the skin on the back of a dark, bluish hue.

It is maintained by some that mutton is best immediately after being killed, or before the animal heat has been lost; but this seems to be a mistake, and butchers themselves agree that it is much improved by standing a day or two. When the weather will permit, the tenderness and sweetness of a joint of mutton may be greatly increased by "hanging" it for a week or even more. In England, the Christmas mutton is frequently "hung" six weeks before using. A light, cool, airy place must be chosen for this purpose.

As regards the nutritive value of mutton, it is popularly considered a lighter food than beef; and it doubtless has a more delicate flavor, less red-blood juices, a looser texture, and a larger proportion of fat. Dr. Smith observes that "although an agreeable and valuable food for all classes, it is not so well fitted as beef to sustain great exertion, but is rather a food for those of sedentary and quiet habits, including women and the sick." The time required for the digestion of mutton is three to three and a quarter hours.

Mutton is in season throughout the year, but in the Autumn is not so good as at other sea-

sons, the meat being dry, and "woolly-flavored."

Baked Mutton.—Either a *loin*, *saddle*, *leg*, *shoulder* or *breast*, may be baked. Put the meat into a baking-pan with a little butter spread over it; pour in enough cold water to cover the bottom of the pan, and then set it in aquick oven. After it has been in the oven about fifteen minutes, baste and place a piece of buttered paper on the top of the meat; if the bottom of the pan is getting dry, add a little more water. If too much fat accumulates in the pan, take the pan out, pour the fat off, adding cold water instead, and set back into the oven to finish cooking. If the paper scorches, substitute another piece, but by basting over the paper it will last a good while. Cook until a skewer or small knife can be run into the joint easily (about twenty minutes to a pound), and then dish. Serve with its own gravy.

Boiled Mutton.—Either the *leg*, *shoulder*, or *neck* may be used for this purpose. Of these the leg is much the choicest; but the neck, being smaller, is convenient for small families, and may be further diminished by taking a few chops from its best end. It also takes less time to cook—another convenience. Wash the joint, but do not soak it, and wipe dry. Put it into a pot as near its size as convenient, cover it with hot water, and add a small tablespoonful of salt; skim off the scum as fast as it rises, boil till you find by probing that it is tender in its thickest part (it will take twelve or fifteen minutes to a pound). Remove from the fire, drain perfectly dry, and serve with melted butter, caper sauce, or with either brown cucumber or oyster sauce. Or carrots and turnips may be boiled with it and afterwards dished with the meat.

Broiled Mutton.—Either chops or cutlets—the latter taken from the neck—may be broiled. Trim off the skin and superfluous fat, sprinkle a little salt and pepper on each chop, and broil on a gridiron over a bright fire. It will take about eight minutes if they are not more than ½ inch thick. Butter them before sending to table.

Broth (Mutton).—1. Take a pound of meat, free from bone, and put it on the fire with a quart of water; when it boils skim off every particle of the scum and then add a little cold water to make the scum rise afresh; add a parsley-root about the size of two fingers, and a tablespoonful of rice or barley (previously soaked); boil it an hour and a half at least, or until the meat falls to pieces; then strain it and serve. Either mutton, beef, or veal may be used in this receipt or the three combined.

2. (With the meat in).—Cut a neck of mutton into chops, taking off every particle of fat; put it into a stew-pan and pour in enough boiling water to cover it; slice four carrots and six turnips, and put in the pan at the same time; add a little salt, and as the scum rises skim it off Simmer slowly about four hours. An ounce or two of rice may be added with the vegetables, if desired.

Fried Mutton Chops.—Prepare the chops as for broiling; dip them in beaten eggs and roll them in pounded crackers; fry in hot lard or dripping; drain them as they are dished, and serve hot.

Ham of Mutton.—Select a plump, solid-looking leg of mutton. Mix a quarter of a pound of brown sugar, an ounce of saltpetre, and an ounce of black pepper; rub this mixture into the meat for some minutes until the outer part is well saturated with it; then put the mutton into a large earthen-ware vessel, cover it with about a pound and a half of salt, and let it stand three weeks, turning it every day and basting with the brine; after the first week add a teacup of vinegar. At the expiration of the three weeks, remove the ham from the pickle, wash first with cold water and then with vinegar, and hang it up in a cool place for a week before it is used. Soak an hour in cold water before boiling, and cook like an ordinary ham.

Haricot (Mutton).—Slice a carrot, a turnip, and a head of celery, and soak an hour and a half in salt and water, or boil tender in broth, adding a dozen small onions. Then take a neck of mutton cut into chops, trim off most of the fat, flour them and fry them brown, seasoning them with a sliced onion, salt, black pepper, and cayenne. Next fry the vegetables, and put them with the meat into a stew-pan with all the gravy, a little sugar, and a little catsup, and simmer the whole very gently for two hours. Strain off the gravy, thicken it with butter and flour, and pour it over the meat on the dish.

Hash (Mutton).—Cut cold mutton up into small squares, leaving out most of the fat, and prepare same as beef hash; add, however, a small onion (grated), to give a slight flavor of onions and thus hide the strong mutton taste.

Irish Stew.—Procure 3 lbs of thick mutton chops; blanch them; return to the fire neatly arranged in the bottom of a clean stew-pan, a little more than covered with cold water; bring slowly to boil, adding 1 teaspoonful of salt. When skimmed clean, add a large garnished bouquet of parsley, a blade of mace, and 8 pepper-corns. Simmer 20 minutes; then add 12 small onions whole, and 2 tablespoonfuls of flour dissolved in a little cold water. Set it by the side of the fire, where it will gently simmer for an hour; then add 12 small potatoes, pared neatly round, the size of the onions. As soon as the potatoes are tender, remove from the fire; dish the chops in close circular order; take out the potatoes and onions whole into the center; strain the sauce, add 3 tablespoonfuls of chopped parsley, and pour over the stew.

Minced Mutton (browned).—Take cold roast mutton, and cut away all the skin and fat; chop it up very small and season with pepper and salt; mince a little parsley and onion, and mix all together with a quarter of a pound of grated bread-crumbs. Moisten the mixture with a tablespoonful of vinegar and a teacupful of gravy; put it into a pie-dish; lay an ounce of butter in small bits over the top, and grate

bread crumbs over it. Add a little butter, and brown in the oven or before the fire.

Pie (Mutton).—I. Trim the fat from cold roast mutton; cut in thin slices and place in a baking-dish, seasoning with pepper, salt, and a grated onion (or Chili sauce); dredge a little flour over every layer, and add, in small bits, a piece of butter the size of an egg; cover with well-seasoned mashed potatoes, or with boiled rice, and bake three-quarters of an hour.

II. Put thin slices of cold boiled mutton in a baking dish, with the remains of drawn butter, and capers, a little pepper, salt, and a cup of white stock. Cover with potato, rice, or pastry, and bake three-quarters of an hour.

III. Cover the bottom of a buttered baking-dish with bread crumbs, then a layer of cold mutton in thin small slices, a layer of peeled sliced tomatoes, thin bread, and so on, having the last layer of tomatoes covered with bread crumbs. Season every layer with pepper, salt, and small bits of butter. Bake slowly for one hour.

Roast Mutton.—The joints for this purpose are the leg, the shoulder and the saddle, or chine. The leg is seldom good roasted unless the mutton is very tender. Wash the meat well in cold water, and dry it with a cloth. Have the fire clear and hot, and put the meat on with a little water in the dripping-pan. Allow about twelve minutes to the pound. Baste often, at first with salt and water, and afterwards with the gravy. If it browns too fast, cover with a sheet of buttered letter-paper. Skim the fat off the gravy and thicken with browned flour. Serve with gravy or currant jelly.

Stewed Mutton (like Venison).—Skin and bone a loin of mutton and lay it into a stew-pan, with a pint of water, a large onion stuck with six cloves, half a pint of port wine, and a spoonful of vinegar; when it boils, add a small bundle of thyme and parsley, and some pepper and salt; let it stew two hours, turning it often. Make some gravy with the bones, and add it at intervals to the stew. This makes a very handsome and savory dish.

II. (A Good Family Stew.)—Take three or four pounds of mutton, remove all the fat, and cut the lean into squares; crack the bones and add them; put the whole into a pot with enough cold water to cover well, cover it over, heat gradually, and boil for an hour; then add half a pound of salt pork cut into strips, a minced onion and some black pepper; cover and stew an hour longer, or until the meat is quite tender. Make out a little paste, as for pie-crust, cut into squares and drop into the stew; boil ten minutes, and season with a little parsley and thyme; thicken with two tablespoonfuls of flour stirred into a teacupful of cold milk. Boil up once and serve hot.

MYRRH.—A fragrant, bitter, aromatic gum-resin which exudes from a tree that grows in various parts of Asia and Africa. It is one of the ingredients in most tooth powders and mouth-washes, and has a very soothing and healing effect upon irritated gums. It is also useful in disordered conditions of the digestive organs, as an expectorant, and as a gargle for the throat. Internally it is used chiefly in the form of the Compound Iron Mixture, which is composed of myrrh, carbonate of potash, and sulphate of iron. The dose is two tablespoonfuls three times a day. Externally use the tincture in from eight to sixteen times its bulk of water.

MYRTLE.—A hard-wooded, evergreen shrub, possessing a peculiar and highly agreeable fragrance. It is a universal favorite for indoor culture. The myrtle does not require large pots, and the proper soil is three parts loam, with one part each of sand and leaf mould. It will flourish well in almost any situation, but requires plenty of light and air during the summer, which is its season of growth; it should then be put out of doors in a shady place. It requires moderate washing and watering. The flowers are usually white, and are produced in profusion in midsummer. *M. Communis* is the plant commonly cultivated, and of this there are many varieties, with small and large leaves, variegated foliage, and flowers of single or double. *M. tenuifolia* is a new species, and a fine plant; and *M. tomentosa* is a fine Chinese species, with purple flowers changing to white. This latter should be oftener cultivated.

N

NAILS. (*See* FINGER NAILS and TOE NAILS.)

NAINSOOK.—A kind of jaconet muslin which is still thicker than ordinary jaconet. It is woven plain or in striped figures, the stripe running the way of the warp. It is very durable; and must be shrunk before cutting into garments. Generally a yard wide.

NANKEEN.—A kind of cloth which was originally manufactured in China only, and, it is said, derived its agreeable pale salmon-colored tint from the natural color of a kind of cotton grown near Nankin. An English imitation is now made in Manchester, which looks equally well at first, and even better, as it is more evenly woven; but it gradually loses its color, which is obtained from a dye. The Chinese nankeen is rather expensive, and seldom seen in this country: the English is plentiful and cheap.

NARCISSUS.—A large family of hardy bulbs, belonging to the same family as the daffodil and jonquil. There are many varieties of the narcissus of which the principal are the Roman and Polyanthus, the latter being the loveliest bulbs of the class. They bloom in clusters of six to twelve flowers on a single stem, and the flowers are of every shade from purest white to deepest orange. The cup of the white varieties is always yellow, while that of the yellow is a deep orange. The double narcissus is desirable for its perfect flower and exquisite fragrance. All the varieties succeed finely either indoors or in the open border. They require the same treatment as hyacinths (*See* HYACINTHS), and should be planted three inches deep, in clusters ten inches apart.

The best varieties of the Polyanthus Narcissus are: *Bazelman Major*, white and yellow; *Grand Monarque*, white and citron; *Grand Primo*, white and citron; *Grand Prince*, white and lemon; and *Soleil d'Or*, yellow and orange.

NARCOTICS.— Substances which introduced into the stomach have in the first place a stimulating influence on the nervous system (differing in this respect from sedatives), soon followed by a depression of those powers accompanied by sleep, or by coma if given in sufficient quantities. To this class of medicines belong opium, hemlock, henbane, belladonna, aconite, camphor, stramonium, alcohol, ether, and a variety of other substances. A full dose of a narcotic introduced into the stomach will, if the stomach be empty, destroy the desire for food, while if it contain food, the digestive process is suspended or rendered slower. Their continued or frequent use is injurious to the nutrition of the body, besides being attended with immediate danger to life. They should never be used by any one except under medical advice, and then only in strict accordance with the doctor's directions. (*See* MORPHINE.)

NASTURTIUM.—The name properly given to *Indian cress*, a very useful and showy garden plant. It grows abundantly and is easy of cultivation, flourishing without attention in any moderately rich soil. The young leaves are excellent in salads, being in this respect scarcely inferior to winter-cress to which it is related. The flowers serve as a garnish for dishes of cooked meats; and the scarcely formed buds, and the green seed (pods or fruit) when preserved in vinegar make an excellent small pickle, which is used like capers and which many prefer to the latter. These pods should be gathered in August.

Pickled Nasturtiums.—Gather the pods quite young, and a portion of the buds, when very small, should be mixed with them. Prepare a pickle by dissolving an ounce and a half of salt in a quart of pale vinegar, and throw in the pods as they become fit, from day to day. Use them instead of capers for sauce. When the pods are purchased for pickling, put them at once into a jar and cover them well with vinegar.

NECK, Dislocation of. (*See* DISLOCATIONS.)

NECK, Stiff.—This is nothing more than a cramp, or rheumatic affection of the muscles of the neck, and is caused by sitting in a draught; but its persistence, and the delicacy of the part affected make it necessary to treat it with care. Relief may generally be obtained by warm fomentations and the warm bath; warmth should also be applied by means of hot flannels wrapped round the neck. This will usually be effective in a few hours at furthest, and in the mean time it is best to keep quiet and especially to avoid any sudden starts or wrenches to the neck. Any attempt to place the neck in its proper position by manual force is attended with danger.

NECTAR.—*Take:*–Raisins (chopped), 2 lbs; honey, 4 lbs; juice of 2 lemons strained, and the peel of the same rubbed on sugar; boiling water, 2 galls; 3 bottles of sherry, or 3 pints of rum, or brandy, or gin.

Mix all the ingredients together and let them stand two weeks; then strain; and afterwards filter clean and bottle.

NECTARINE.—A variety of the peach, distinguished by its perfectly smooth skin and the pulpiness of its flesh. As in the peach, there are two sorts of nectarines: the freestone, with the flesh parting from the stone; and the clingstone, with the flesh adhering to the stone. Among the choice varieties are the *early violet*, the *Roman*, the *French white*, the *Boston*, and the *late yellow*. Nectarines can rarely be grown in the northern parts of the United States, without the protection of glass and the forcing of artificial heat, and consequently but few of them are found in our markets. They begin to ripen about August 1st, and continue good until October.

NEGUS.—In order to make good negus it is necessary to use good wine and not as some suppose any sort of stuff in any condition. *Port negus* is delicious if made as follows:– Pour boiling water upon a sufficient quantity of sugar to sweeten the whole, stir it well; heat some good Port (making the mixture strong or mild according to taste) and pour it to the water; stir together briskly, and add a little grated nutmeg. A slice of lemon put in with the sugar and a little of the yellow peel scraped with it improves the negus; but it is very good without.

Barley Negus.—To one pint of barley water, put half a pint of wine, a tablespoonful of lemon-juice, with grated nutmeg and sugar to taste. This is a very agreeable and refreshing drink.

NERINE.—The Nerine is one of the finest of the Cape Bulbs, making beautiful plants either for parlor or garden. For indoor culture the soil should be very rich loam, peat, and sand, in equal proportions, and water should be plentifully supplied during the flowering and growth. The flowers have a peculiar lustre, and glitter like jewels in the sun; they are produced in showy umbels in September or Octo-

ber. After the period of flowering is over, dry off the plants gradually and set them aside in a cool dark place for a season of rest. In growing them in the garden the treatment should be the same as for Hyacinths.

N. coruscans is the most common species; it has large umbels of shining, salmon-colored flowers. *N. curvifolia* is a fine species with glittering scarlet flowers. *N. sarnensis* is the far-famed Guernsey Lily. All these varieties may be procured of any large dealer at a trifling cost.

NETTLE RASH.—A disease which takes its name from being attended by an eruption similar to that produced by the stinging of nettles. It is caused by the use of certain articles of food, shell-fish, fruit etc. In some persons, these produce, after a few hours, tingling of the skin, and then itching and burning; soon after the itching has commenced wheals appear on the skin; these are of whitish color and the skin around is often very red; the face is swelled, the eyes closed, and often with all this there is a feeling of nausea and weight at the pit of the stomach.

Treatment.—The best treatment is to dislodge the offending matter by an emetic of ipecacuanha (eighteen grains or one scruple of the powder, or one teaspoonful of the syrup, for an adult), and afterwards a brisk aperient should be taken. The warm bath often gives much relief. To allay the irritation, dust starch-powder over the eruptions; or use a lotion of elder-flower water or rose-water, in half a pint of which has been dissolved one drachm of carbonate of ammonia and half a drachm of sugar of lead. In severe cases, seek medical advice.

NEURALGIA.—An increased and perverted sensation in a nerve, arising from some disease affecting the function or structure of a nerve or its centres. It is thus of two kinds: functional (when unconnected with organic lesion at any part of the nervous course or at the nerve centres); or, as is more frequently the case, structural (connected with some organic change, acute or chronic, more frequently the latter, at some part of the nerve's course or at the nervous centres). The causes of neuralgia are various and often obscure. They may be either constitutional or local; the former arising from an enfeebled state of the body or an impoverished condition of the blood, the latter from inflammation of the enveloping sheath of the nerves, or the development of tumors along or near their course. It may be caused by the circulation of poisonous secretions, such as corea, bile, etc., in the blood, or by the miasma of marshy regions. The pain is intense, but intermittent; sudden in its onset, and abrupt in its departure, shooting or plunging in its character, and often quite excruciating; readily excited by the slightest external impression, but seldom aggravated by firm pressure on the part—on the contrary, often relieved thereby.

Treatment.—The treatment of neuralgia depends of course upon the causes that produce it. When it arises from constitutional causes it generally yields to treatment. The neuralgia, for instance, that depends on an impoverished condition of the blood can be cured by iron tonics, good diet, and outdoor exercise; that which arises from the effects of miasmatic poisoning disappears rapidly under the use of quinine; and that of rheumatic origin can be controlled by preparations of colchicum, the alkalies, and alkaline and sulphur baths. The neuralgia which sometimes occurs in hysteria yields in some cases to the mineral tonics, electricity, shower-baths, and exercise in the open air. When neuralgia is caused by a tumor near the origin of the nerves, in the brain or spinal cord, its radical cure is generally impracticable; where it depends on the pressure of tumors that can be removed, the pain will generally disappear with the removal of the cause. In inflammation of the nerve-sheath—a frequent cause of neuralgia—local counter-irritation by cups, blisters, setons, issues, etc.; always gives relief and usually effects a cure. Temporary relief may be secured in all forms of neuralgia by the administration of powerful anodynes. Those most commonly used are morphine and aconitine, they may be used either internally or externally, *but only under the advice of a physician.*

The following can be recommended as an excellent nerve tonic in neuralgia:—

Iron reduced by hydrogen, 2 drachms.
Arsenic, 1 grain.
Divide into 40 pills.
A pill after meals, 3 times a day.

NIGELLA.—The *Nigella Hispanica* and *N. Damascena* (Love in a Mist) are very desirable hardy annuals, growing well in any good garden soil. Sow the seed in May when the days become warm. The plants flower very freely from June to October, and have curious seed-vessels. The covers of the flowers are white, blue, purple, and yellow.

NIGHT-DRESS.—This garment is made after the pattern of the Sacque (*See* SACQUE, figs. 1 and 2), or else after that of the yoke, as explained under the head of blouse-waists (*See* WAISTS.)

Three yards and five-eighths of a yard-wide material is a sufficient quantity for either pattern, for a person of medium size. In cutting out the fronts of the sacque night-dress we follow the pattern, Fig. 1 (*See* SACQUE), as far as the waist line. We begin by cutting off the five-eighths destined for the sleeves; then we fold the three yards so as to give two breadths of equal length. Separate them, double one lengthwise in the middle, and cut out the fronts. If desired to have the garment open all the way, cut the breadth apart in the middle, otherwise cut the fronts apart with a slit twenty inches long. From the upper part of this breadth there will remain outside the breadth of the shoulders enough material to make gores for the fronts; cut them as wide as possible, sew them on to the breadth, selvage to selvage, and even the slope of the whole. Cut the pattern for the

back in the same way by Fig. 2 (*See* SACQUE), and add gores. To strengthen the garment it is usual to line the shoulders, cutting the lining in shape like a yoke.

The sleeves for a sacque night-dress should be cut after the plain coat-sleeve pattern (*See* WAIST, page 569.)

The fronts and back should be stitched together on the shoulders and under the arms, and the seams felled down. The edge should be hemmed up about an inch. The front is finished off with a narrow hem on one side for the buttons, and a wide one on the other for the button-holes. The neck should have a narrow binding and a collar, and the sleeves may be simply hemmed up, or may be finished off with a cuff.

For a night-dress cut with a yoke, we take off the breadths from six to eight inches shorter than for the sacque pattern. The yoke is cut from the plain waist pattern (*See* WAIST), allowing two inches more breadth to the chest measure. A yoke can also be cut without seams on the shoulders, from the pattern for capes, Figs. 1 and 2 (*See* CAPES). The breadths for the night-dress are gored in the same way as for the chemise (*See* UNDERGARMENTS), and a short slit is made in the front breadth, or it is cut down the whole length. The breadths are then gathered across the top, leaving two or three inches plain near the arm-size, as explained for the back of the shirt (*See* SHIRT), and the yoke sewed on.

The sleeve of the yoked night-dress should be the gathered sleeve, and the garment will be finished off in the same way as the sacque night-dress.

NITRIC ACID.—AQUA FORTIS. POISON. (For *symptoms* and *treatment* see SULPHURIC ACID.) Extremely corrosive. Readily dissolves metals. The "strong" is about 70 per cent. pure acid; the "dilute" is "strong," with five or six times its bulk of water, and is used as a tonic. That sold as "double aqua fortis" contains 60 per cent. pure acid, and "single aqua fortis" half that.

NITROUS OXIDE.—Known as *Laughing Gas*. Sir H. Davy discovered that it was respirable and produced intoxicant effects. Small quantities may produce uncontrollable laughter; hence the name. It was found that it would produce anæsthesia. After discovery of ether and chloroform it was almost discarded; it acts more quickly than these, and is claimed to be less fatal in effects, and has again come into use. Should be used only under medical advice.

NOSEBLEED. (*See* BLEEDING.)

NOTE. (*See* PROMISSORY NOTE.)

NOYEAU. (*See* LIQUEURS.)

NURSES AND NURSING.—In any case of sickness, whether serious or otherwise, nothing—not even skilful medical advice—is more important than good nursing. Only doctors know how many valuable lives are saved by good nursing, and on the other hand how many are actually thrown away by the want of it; but fortunately its importance is beginning to be better appreciated by the people at large. In cases of ordinary sickness the members of the family usually do the nursing, and in such cases their zeal and affection make up to a great extent for other deficiencies; but when a disease is lingering, or from its character requires bodily strength in those employed as nurses, the services of a professional *sick nurse* should be obtained. Such a nurse knows, or ought to know, how to perform many important duties of which those less accustomed to sickness are ignorant. She will also be quick to notice changes in the patient's symptoms which the relatives, from inexperience, would overlook, and which it may be important for the doctor to be informed of. But most sick nurses will require to be superintended by those most interested in the invalid's recovery. They are often inattentive to the needful ventilation of sick-rooms, and to the regulation of their temperature, keeping up the fires, and especially at night; this fault frequently increases the patient's fever in a way which puzzles the physicians to account for. Sometimes also they are careless in administering the medicines at the precise hours ordered, and are not always to be relied upon to give the right quantity. In the convalescent stages of fever, they also require to be cautioned in respect to the diet of their patients, which in quantity they are disposed to over-do.

Qualifications of a Nurse.—Not every one is fitted for a nurse; not because of wilful wrong-doing, but because they are not "cut out for it." Talent for nursing is in a great measure a natural gift, either in man or in woman; and, contrary to the general opinion, it is found as frequently in man as in woman. The absolutely indispensable qualifications of a good nurse are healthfulness; strength enough to lift the patient when necessary; activity, usefulness, cheerfulness, yet with the power of being quiet—a noisy nurse being utterly out of place in a sick-room. She should be free from any habitual cough, or any habit which might annoy a patient, such as snuff-taking, and the like. She should be scrupulously cleanly in person and habits, and in particular should have pure breath. She should be able to read writing readily, or she may be led by the resemblance of drugs and vials to make dreadful mistakes. She ought to have her five senses — sight, hearing, feeling, smell, taste — in a healthy, active condition. *Sight*, that she may be able to read directions or read aloud to the patient, and watch the change of countenance. A quick-sighted nurse will not need to wait till the sufferer has asked for anything in words. She will from the motion of an eye, or the lips, or a finger, see in a moment what is wanted. *Hearing*, that she may catch the faintest whisper, and not oblige a weak patient to exert the voice, and to repeat every request. *Feeling*, that she may detect any change in the heat or dryness of the skin of the patient, and not use any application

which will either scald with heat, or cause a chill with cold. *Smell*, that she may detect the least impurity in the atmosphere of the room, or in giving medicine, notice if there be any mistake. *Taste*, that she may not offer food unfit to be used, or good in itself, but cooked in such a way as to be disgusting to the patient. She should be an experienced cook, so as to prepare such food as the patient requires. This is often of great importance where the food of the sick-room is different from that of the rest of the household, and must be prepared at irregular and frequent intervals. In selecting a sick nurse it is well to take the attendant physician's advice, as it is with him that she has to co-operate and to him that she should be chiefly responsible. (*See* WET NURSE.)

NURSERY. (*See* CHILDREN, FURNITURE and INFANTS.

NUTMEG.—The true nutmeg is a native of the Moluccas or Spice Islands, but is principally confined to the island of Banda, under the equator, where it bears blossoms and fruit all the year round. The latter is gathered at different periods — namely, in July, November and April. The mace is good in July, when the nuts are most abundant; in November it is superior, but in April both the nutmeg and the mace are in greatest perfection, the season then being driest. The outer pulpy coat is first removed, and then the mace; the nuts are then placed over a slow fire when the inner shell becomes brittle and the seeds, or nutmegs of commerce, are easily taken out. They are then soaked in sea-water and impregnated with lime, a process which answers the double purpose of securing the fruit from the attacks of insects and of destroying the vegetating property.

There are two sorts of nutmeg—one wild, which is long or oval shaped and much inferior; the cultivated nutmeg is nearly round. The best nutmegs are firm, hard, and of an unctuous consistence, the odor strong, aromatic, and agreeable; the taste hot and acrid. When cut across, they appear full of small veins, which are full of volatile oil. This oil is yielded by distillation, and it possesses the flavor of the nutmeg in perfection, two drops being equal to a pound of the powder. It is employed in medicine.

The nutmeg is much used as a condiment, and is one of the most wholesome of the spices; but it has been observed that when taken in large quantity it has narcotic effects, and produces symptoms indicating great tendency to the head, on which account it should be cautiously used by persons of an apoplectic or paralytic habit.

NUTS.—These are a species of fruit much enjoyed by most persons, but though they are nutritive, they are less digestible than any other vegetable substance used as a food. Boiled chestnuts are floury and soft, and consequently unobjectionable, but raw nuts are hard, dense, and full of oil, and are apt to lie for a long time on the stomach undigested. The different kinds of nuts used as food in this country, as well as those imported, are described in their proper places.

Nuts of any kind may be preserved during the winter by placing them in a large earthenware pan, which when filled is to be placed in a deep hole dug in the ground; the top of the pan should be covered with a board on which a heavy weight is to be placed, the hole then being filled with earth. By this method nuts may be kept in a fresh state till the season of their maturity returns.

NUX VOMICA.— POISON. — *Symptoms:* Tetanic convulsions, difficult breathing, finally asphyxia. *Treatment:* In case of poisoning by Nux Vomica, the poison must be promptly removed either by the stomach-pump or by emetics; but when the paroxysms have set in, an attempt to use either generally brings on convulsions. Then it is best to trust to the inhalation of chloroform.

The fruit of *Strychnus Nux Vomica*, which grows in the East Indian Archipelago. The seeds, which contain the active principle, are extremely bitter, and contain a considerable quantity of *strychnia*, one of the deadly poisons. A sixth of a grain is sufficient to kill a dog. Nux Vomica is extensively employed in medicine as a tonic for the digestion and in some derangements of the nerves; and the seeds, rasped or filed, are often used to destroy noxious animals and vermin. But it should be used with extreme care, and never placed where children can possibly get at it.

O

OATMEAL.—The flour or meal which results from grinding the kernel of oats. The oats of this country, while superior to that produced in southern England and on the continent, is inferior to that of Scotland, whose climate is better adapted for it and where much more attention is paid to its cultivation. Scotch oatmeal, therefore, is superior to any other for table use, and as it is prepared in such a way as to improve rather than otherwise by keeping, no damage is done to it by importation. "Oatmeal," says Dr. Smith in his book on *Foods*, "is known as a strong food and one that requires much cooking in order to break its starch cells; but when it is well cooked it thickens milk or water more than the same weight of wheaten flour. It also yields a jelly or blanc-mange of a finer quality than that

derived from wheaten flour, and is doubtless the stronger and better food." In Scotland it is used more extensively as food for man than anywhere else in the world, and in certain sections forms almost the exclusive diet of an exceptionally hardy and robust peasantry. The flavor, although sweet, is rough, and to be thoroughly approved must be eaten in early life; which accounts, perhaps, for the fact that in this country where wheat and Indian corn are so cheap and abundant, it has never come into general or extended use.

When oats are ground in the ordinary way a portion of the husk is left in the meal, but less in meal made by mill-stones than by crushing corn-mills. The meal is ground in two forms, namely, in somewhat large grains, as in the Scotch oatmeal, and in fine powder like flour, but either may be obtained from the same grain. The Scotch always prefer the large grain and boil it for a long time; by which they obtain a thicker and sweeter porridge than can be obtained from the finer meal. The longer it is boiled, the more digestible is the food produced. Oatmeal is cooked in two principal ways, namely, as porridge and cakes. The word "porridge," in Scotland, means oatmeal boiled well in water, in which state it is known in England as "hasty-pudding;" but it is more usual in England to boil a smaller portion of it with milk and water in the preparation of milk porridge. The former kind is eaten as a thick pudding with cold milk, or it is sweetened with molasses, or sugar and butter, as in eating hominy. Oat-cakes are made by mixing the meal with water and kneading it into a dough, which is baked on iron plates, producing a bread much enjoyed by those accustomed to it, and extremely nourishing. One advantage possessed by bread made of oats is that it will keep sweet as long as it is kept dry.

Groats (or grits), are the whole kernels of the oats when freed from the husk. They are not eaten in the form of bread or cake, but are boiled in water or milk in the preparation of gruel. When thoroughly cooked with milk, they make a very nutritious pudding; but as the flavor is far less delicate than that of rice they are rarely used for that purpose. The groats require to be cooked much longer than ordinary oatmeal before they can be digested easily.

Gruel (Oatmeal). *See* GRUEL.

Mush (Oatmeal).—Make same as the mush of Indian meal, but boil at least twice as long.

Porridge (Oatmeal).—Put as much water into a sauce-pan as will make the desired quantity of porridge; let it boil, and then take a handful of oatmeal in the left hand and let it fall by degrees into the water, stirring the water and meal quickly around with the right with a wooden spoon or ladle; do this till it is of the consistency of thick gruel, then salt to taste; let it boil for ten minutes; add a little more boiling water, and boil it five minutes longer; it will then be quite smooth and very digestible (boiling it well is the secret of making it digestible and nourishing for invalids).

Pudding (Oatmeal).—Pour a quart of boiling milk over a pint of oatmeal, and let it soak all night; next day beat two eggs into it, and add a little salt; butter a bowl that will just hold it, cover it tight with a floured cloth, and boil it an hour and a half. Eat it with butter and salt, When cold, slice and toast it, and eat it as oat-cake buttered.

OIL-NUTS. (*See* BUTTERNUTS.)

OIL-CLOTH.—This name is applied to a kind of floor-covering made of cloth painted over with oil colors, so as to be impenetrable to water; and also a lighter kind of cloth used as a covering for tables, etc., made in the same way. For the former a stout hemp canvas is chosen, and after being well sized and rubbed down with pumice-stone, is covered with four coats of stiff oil paint. It is then printed in the same manner as calico, the colors employed being always white lead mixed with ochre, umber, and the usual earthy pigment ground in linseed oil and mixed with a little turpentine. In the cheaper kinds of oil-cloth whiting is mixed with the white lead, but such cloth cracks and does not wear well. It is reckoned that every square yard of oil-cloth should weigh $3\frac{1}{2}$ to $4\frac{1}{2}$ lbs., and hence the quality of the cloth may in part be estimated by the weight. There is a great variety of styles in the patterns of oil-cloth. Some are made to imitate marble, some wainscots, and some carpets of various kinds. Those are best which have several colors and a rather small pattern. When the pattern is large, defects are sooner perceived; but on the other hand, those which have the pattern large to imitate marble can be repainted by any house painter. In buying an oil-cloth, select one that has been manufactured for at least two years; the longer it has stood previous to use, the better it will wear, as the paint will have become hard and durable. An oil-cloth that has been made within the year is scarcely worth buying, as the paint will be defaced in a very little time. Age of course adds to the cost, and, consequently, the cheaper oil-cloths are very apt to be both flimsy and newly-made.

Oil-cloth for covering tables, etc., is made on fine canvas; one side after having received the proper number of coats of paint, is printed with blocks; and the other side, next the table, receives only one coat of paint, which, while wet, is strewed over with flock made of cut wool, so as to resemble baize.

In cleaning oil-cloths never use either hot water or soap, as the latter will cause the paint to come off by dissolving the oil with which it was made. If not too much dirtied, oil-cloth may be kept clean by wiping with a damp cloth and rubbing well with a dry cloth and then with a dry brush till it shines. If much soiled, rub briskly with lukewarm water and a soft cloth.

To Make Oil-Cloth.—A very good and durable oil-cloth can be made as follows:—Place some good rosin or gum-lac over the fire in drying linseed oil till the rosin is thoroughly dissolved, and the oil brought to the thickness of cream. Spread this upon canvas, or any linen

cloth, so as fully and entirely to glaze it over; suffer it to dry perfectly; and it will be found impenetrable to wet of every description. To give a color to this varnish, grind the blue, green, etc., with the last coat that you lay on.

A better method than the above is first to cover the canvas with a liquid paste, made with drying oil in the following manner:—Take Spanish white or tobacco-pipe clay, which has been completely cleaned by washing and sifting it from all impurities, and mix it up with boiled oil, to which a drying quality has been given by adding a proportion of litharge one-fourth the weight of the oil. This mixture, being brought to the consistence of thin paste, is spread over the cloth, etc.; when the first coating is dry, a second is applied. The unevenness occasioned by the coarseness of the canvas or the unequal distribution of the paste, is smoothed down with pumice-stone reduced to powder and rubbed over the canvas with a bit of soft serge or cork dipped in water. When the last coating is dry, the canvas must be well washed in water, to clean it; and when dry, a varnish composed of gum-lac dissolved in linseed oil boiled with turpentine, is applied, and the process is complete. The color of the varnished canvas thus produced is yellow.

A cheap and serviceable oil-cloth for the kitchen or other room may be made thus:—Buy a cheap tow-cloth, and fit it to the size and shape of the room. Then stretch and nail it on the sunny side of an outbuilding, and, with a brush, cover it with a coat of thin rye paste. When this is dry, put on a coat of yellow paint, and let it dry for a fortnight; then put on a second coat, and at the end of another fortnight a third coat. Then let it hang two months to "season," and it will last for many years. The longer the paint is left to dry the better; and if varnished it will last much longer.

OINTMENTS. (*See* DRUGS, GLYCERINE, and under the special disorders to be treated.)

OKRA.—A plant whose unripe pods are much used in some parts of the United States, alone, or in soups and stews. It is the basis of the favorite Gumbo soup of the South. It is raised by sowing the seeds from April till June in drills an inch deep, dropping the seeds about eight inches from one another, and earthing up the plants two or three times during the season. It grows on a smooth stem four or five feet high, and the pods may be used from August till the end of November. By slicing the pods into rings and drying them on strings, they can be preserved for winter use, and are then especially useful for soups, stews, etc. Okra is a wholesome and highly nutritious vegetable; but when eaten alone the pods should be young and tender.

Boiled Okra.—Place the pods in enough salt and water to cover them and boil till quite tender. Drain thoroughly, dish, pepper and salt to taste, and pour over the top three or four tablespoonfuls of melted butter.

OLEANDER.—A very showy plant well adapted for cultivation, both in the parlor and in the garden. To bloom in perfection, they need a stove, but they do well out of doors in any moderately rich soil. They flower freely when scarcely a foot high, but will grow to the height of ten or fifteen feet, forming beautiful trees covered with long, willow-like, leathery leaves, and terminal clusters of large rose-colored, white, or variegated flowers. Their natural season for blooming is July, but that may be changed and bloom produced at any season. In indoor culture give them plenty of pot room in soil made of two parts loam, two parts peat, and one part well-rotted manure. During the growing and blooming seasons water should be abundantly supplied; and as the plants are subject to white scale, frequent washings of the leaves and stems are desirable. They may be wintered in a light cellar, and then water should be given sparingly.

The principal varieties are the double rose (*Neereum oleander splendens*); *striata pleno*, with double striped flowers; and *purpurea*, dark red. There are many other varieties, and any of them will repay the care bestowed upon their cultivation.

OLIVES.—The fruit of the olive-tree, which is extensively cultivated in Italy, Spain, and the South of France, partly for the green fruit and partly for the oil which it yields when mature. Olives are oval in shape, with a smooth rind, and closely resemble a small half-ripe plum. For the purposes of the table they are gathered when immature, and are then pickled in salt and water and barrelled for exportation. The Italian olives are the best, then the French, and lastly the Spanish, which, though large, are not so well flavored. In choosing, select the light-colored and bright-looking ones; those which have a blackish cast are unfit to eat.

Pickled Olives are supposed to have peculiarly appetizing properties, but they are eaten chiefly with a view to remove the taste of food from the mouth previously to enjoying the flavor of wine. They should be passed round after the soup.

OLIVE-OIL.—This oil, sometimes called *salad oil*, is expressed from ripe olives. It is largely used in the more delicate kinds of cookery, instead of butter, and is a useful addition to salads, preventing them from fermenting and from causing flatulency. When it is fresh and pure it has only a very slight yellowish-green color, and but little smell or flavor, so that it may even be drunk by those who like oil; and it cannot be doubted that it is one of the most easily digested fats in food. Its use in cookery might properly be extended in this country, notwithstanding our excellent animal fats.

The best quality of oil is that produced by the first gentle pressure of the olives, and this is at once bottled in the flasks peculiar to the article. Stronger pressure on the fruit breaks the kernels and produces an inferior grade of oil, which is exported in jars and barrels. Italian oil is superior to either French or Span-

ish, and is distinguished as Florence, Lucca, and Gallipoli oil. The first is most desirable.

OMELETTE.—Put an ounce of butter in a frying-pan the size of a breakfast plate; when hot, pour in three eggs that have been beaten for a moment, with a little salt and chopped parsley; as the omelette cooks, lift the edge with a knife and press it toward the centre. The instant it is set (it need not be brown) fold one side over the other, and serve immediately. A spoonful or two of rich cream added with the parsley is an improvement. Beat the eggs but very little, to avoid making them too thin. The fact that in the best omelettes we often see spots and streaks of white, proves the beating to have been very slight.

Aux Fins Herbs (Omelette).—Beat the eggs and prepare the batter exactly as for plain omelette, but when the pepper and salt are put in add a strong seasoning of parsley and onion (minced), or of parsley, thyme, and sweet marjorum; mix together well, and fry at once. This is a very savory dish.

Cheese Omelette.—Prepare the batter as before, but before putting into the frying-pan stir in some nice old cheese (grated) and season with parsley and green thyme. Cook as soon as the ingredients are well mixed.

Friar's or Apple Omelette.—Prepare twelve medium sized apples as for sauce, and stir in a quarter of a pound of sugar and a quarter of a pound of butter; when cold, add four eggs well beaten; fry in butter or lard made very hot.

Ham Omelette.—Prepare the batter as for plain omelette, and then stir in some ham minced very fine. Cook at once and serve as soon as done. *Or*, cook the omelette plain, and when it is done scatter the minced ham thickly over the surface and double the omelette over it. Chicken, tongue, or veal may be used instead of the ham, in the same way.

Savory Omelette.—Same as *Omelette aux fins herbs*.

Soufflé.—I. Beat the yolks of six eggs first by themselves and then with four tablespoonfuls of sifted white sugar and the rind of half a lemon grated on a fine grater. Whisk the whites to a solid froth, and just before the omelette is poured into the pan, mix them well but lightly with the yolks. Put four ounces of fresh butter into a small frying-pan, and as soon as it is melted, add the eggs and stir them round until they absorb it entirely; when the under side is just set, turn the omelette into a well-buttered dish (hot) and put it into a tolerably brisk oven. From five to ten minutes will bake it; and it must be served the instant it is taken out. It will have risen to a great height, but will sink and become heavy in a very short time.

II. Take a pint of milk and add as much flour as will come to a thick paste on the fire; keep stirring it all the time, and add the yolks of six eggs, a pinch of salt, and enough sugar to sweeten to taste; then stir in the whites of eight eggs beaten to a stiff froth. Put into a quick oven and bake a quarter of an hour; then glaze with white sugar and send quickly to table. Ground rice may be used instead of flour. The rind of a lemon grated, or lemon-juice, gives the omelette an agreeable flavor.

Strawberry Omelette.—Beat up a dozen eggs as before directed, but mix with the yolks instead of pepper and salt a heaping tablespoonful of pounded lump sugar; mix well and fry in butter. When done, put in the centre of it four tablespoonfuls of strawberry jam, let the jam lie long enough to get well warmed through, then double the whole into a half-moon keeping the jam in a mass inside. Dish it, and dust the top thickly with white sugar.

Sweet Omelette.—Beat four eggs together as for plain omelette, omitting the salt and pepper and sweetening to taste with fine white sugar. Fry, and when well set, lay on currant jelly, raspberry jam, preserved apricots, or any other sweetmeat that may be convenient; a large tablespoonful will be sufficient for an omelette of this size. It should be laid on in a lump rather than spread about. Fold one half of the omelette over the other, enclosing the fruit, dust sugar over the top, and send to table on a napkin.

ONION.—The varieties of the common onion are not so numerous as might have been anticipated, considering that it is raised from seed. They vary, however, in very sensible qualities, such as hardness, pungency of taste, shape, size, and the color of the skin. The common onion succeeds well in any rich, moist, sandy soil, using old manures, mixed with ashes and soot, or thoroughly decomposed meadow muck, mixed with well-rotted horse or cow manure. The seed should be sown in May, in drill rows about a foot apart. As the plants appear they should be kept free of weeds, and will need four or five hoeings before the tops arrive at their full growth. The onion requires a full exposure to the sun's rays and all the warmth it can get; so that weeds, if suffered to grow, would impede the progress of the crop by shading it, as well as robbing it of its supply of food. At the end of the season the leaves dry away, when the bulbs should be pulled up and spread upon the ground to ripen and harden. The best way to store them is to string them and hang them up in a cool, dry place; if they are small, they may be kept in nets. The thick-necked, spongy ones should be used first, or the germ may be taken out, and the onions then hung up or kiln-dried. Among the principal and best varieties are the white, or silver-skinned, the yellow, and the red, and they have also various names according to their size, shape, season, and flavor. The very small of the white kind are much used for pickling; the other and larger kinds are applied to various uses.

The first new onions are received from the South, usually from the Bermudas, about the 1st of May; they are large, flat, and red-colored, but sweet and excellent. Then they follow from New Orleans about June 1st, and from New England from the 15th to the 20th of July.

Baked Onions.—The large Spanish or Bermuda onions are best for this purpose. Wash the outside clean, put into a sauce-pan with slightly salted water, and boil an hour, replenishing the water with more (boiling hot) as it boils away. Then turn off the water; take out the onions and lay upon a cloth that all the moisture may be absorbed; roll each in a press of buttered tissue-paper, twisting it at the top to keep it closed, and bake in a slow oven nearly an hour, or until tender all through. Peel them, put them in a deep dish, and brown slightly, basting freely with butter; this will take fifteen minutes more. Season with pepper and salt, and pour melted butter over the top.

Boiled Onions.—Peel and blanch 16 small onions. Prepare a sauce of 2½ oz butter and 2 oz flour in a stew-pan; pour on it one pint of milk and veal broth, or water boiling. Add to it the onions, with 6 pepper-corns, a bouquet of parsley, a blade of mace, and a teaspoonful of salt. A lump of sugar much improves. When tender, remove, strain the sauce, and serve.

Pickled Onions.—Select the smallest ones that can be had, and peel off the outer skin; they are best when newly harvested. To a quart of the onions allow a quart of the best white vinegar, a tablespoonful of salt, and an ounce of whole black pepper; bring these quickly to a boil, take off the scum and throw in the onions; simmer them for three or four minutes, and when they begin to look clear, put them into jars and pour the pickle on them. Any favorite spices can be added to the vinegar.

Roast Onions.—They should be roasted with all the skin on till tender throughout; they may be served alone, with only salt and cold butter, or with roast potatoes or beet-roots.

Stewed Onions.—Strip the outer skin from four or five large Spanish or Bermuda onions, and trim the ends, but without cutting into the vegetable; arrange them in a sauce-pan of sufficient size to contain them all in one layer; just cover these with good beef or veal gravy, and stew them gently for a couple of hours; they should be tender quite through, but should not be allowed to fall to pieces. When common onions are used, they should be first boiled for half an hour in plenty of water, then drained from it, and put into boiling gravy or broth. The savor of this dish is heightened by flouring lightly and frying the onions of a pale brown before they are stewed.

Stuffed Onions.—Choose the largest onions; peel and boil them in plenty of water until done enough. Then take out their insides, leaving a few of the outer coats remaining. Drain well the portion extracted, and chop it small. Mix this with a good piece of butter, a few raw eggs, and bread-crumbs soaked in milk. Stuff with it the hollowed onions. Lay them in a tart-pan which has been previously greased with butter and lined with paper. Bake them, if possible, with fire over as well as under them.

For sauce, take broth, butter, chopped parsley, mace, and stir together over the fire in a sauce-pan with the yolks of a few eggs. Pour it hot over the onions when ready to serve.

OPIUM.—POISON—*Symptoms:* Excessive drowsiness apt to sink into death. *Treatment:* If the drug has been swallowed, empty the stomach by the stomach-pump or an emetic of two glasses of hot water, each with a half-teaspoonful of mustard. Try to rouse the patient, and *keep him roused*, by shaking, tickling the soles of the feet, etc. Use artificial respiration as in DROWNING, which see. After vomiting occurs, strong black coffee should be freely administered from time to time until the patient gets well.

A drug prepared from the juice of the capsules of the poppy, the white variety of the latter being generally used. The preparations from it used in medicine are various, including a confection, a plaster, an enema, an extract, a liniment, a pill (commonly called compound soap pill), a lead and opium pill (aromatic chalk powdered with opium), laudanum (tincture of opium), compound ipecacuanha powder (Dover's powder), compound kino powder, compound powder of opium, compound tincture of camphor (also known as paregoric elixir); opium lozenges, an ammoniated tincture of opium, ointment of galls and opium, and wine of opium. Of course the doses of these vary according to the effect desired to be produced, but supposing it is intended to give rise to an effect comparable to that produced by a grain of opium (which is an ordinary full dose), they would be as follows: of confection of opium (U. S. Pharmacopœoa), 30 grs; of the extract, about a grain; of the liquid extract, 25 drops; of laudanum, 25 to 30 drops; of compound tincture of camphor (paregoric elixir), two teaspoonfuls; of acetated tincture of opium, 15 drops; of opium wine, about 20 drops; of chalk and opium powder, 10 to 20 grains; of compound ipecacuanha powder (known as Dover's Powder), 10 grains; of compound kino powder, 5 to 15 grains; of compound soap pill, 4 to 5 grains; of lead and opium pill, 4 grains.

In order for opium to exercise its free influence it is necessary that it should be absorbed into the blood, but it does not greatly matter how it is introduced, whether by the stomach, by a raw surface, or, as is now extensively practised, by sub-cutaneous injections. If in any of these ways an ordinary dose of opium, or of its alkaloid morphine, be introduced it acts as a narcotic and has a surprisingly soothing influence upon pain or nervous excitement. Should a large dose be given the effects are more marked; sleep of a heavy kind speedily comes on, the breathing is often stertorous, and the pulse is slow. After a poisonous dose, there is a craving for sleep which can hardly be overcome, and sleep if permitted soon passes into complete insensibility and death gradually ensues.

Opium should rarely be used in any form except under medical advice, then the physician's directions should be rigidly adhered

to. The danger of poisoning is not the worst danger to which the habitual or ignorant user exposes himself. (*See* MORPHINE.)

OPHTHALMIA.—This term is applied to inflammation of the thin mucous membrane which covers the front of the eyeball and lines the inner surface of the lids. In some forms of ophthalmia, however, there is inflammation of the cornea and of the anterior part of the strong fibrous coat of the eye, called sclerotic. Ophthalmia is a very frequent affection, presents many forms, and originates from one or more of a great number of local and constitutional causes. Among the principal of these causes are the presence between the lids and the surface of the eye of foreign substances, such as particles of dust, sand, etc; particles of steel and iron, when impelled with much force, adhere to or are imbedded in the tissue of the cornea or eyeball, and so long as they remain keep up inflammation; an inverted eyelash has the same effect; exposure of the eyes to a strong draught and the prolonged action of a heated atmosphere are also common causes of opthalmia, as is long-continued exercise of the eyes on minute objects, especially under artificial light and in close badly ventilated rooms. Constitutional diseases, such as gout, rheumatism, scrofula, and inherited syphilis, render their subjects liable to attacks of ophthalmia.

Simple or Common Ophthalmia is produced by slight injury or by exposure to a draught. The symptoms are redness of the eyeball, "watering" of the eye, and a feeling of smarting and stiffness. These in most cases soon pass away after the application of a cooling lotion; but care must be taken to protect the eye both from light and the action of cold.

Catarrhal Ophthalmia, like catarrh of the nasal passages, is an inflammation of the mucous membrane, attended by the production of mucous or pus. This form of ophthalmia is met with in patients attacked by measles, and occurs in some cases of scarlet fever, and of erysipelas. The symptoms resemble those of simple ophthalmia much aggravated. The eyelids feel stiff, and the patient has a feeling as if sand were in the eye; and the eyeball is of a bright scarlet redness, disposed not regularly over the entire surface, but in irregularly-formed patches. There is a discharge from the eye, which at first is clear and thin, but afterwards yellow, and thick, and viscid; during sleep this discharge collects at the edges of the lid and dries there, gluing together the eyelashes. The lids become red and swollen; the general health gradually becomes disordered; and there is headache, fever, and loss of appetite. In ordinary cases the affection generally lasts for ten days or two weeks, but when the inflammation has been allowed to proceed without treatment, it often passes into an obstinate chronic condition. Where there is not very much local irritation, frequent bathing of the eyes with cold water, and the application of alum lotion (one grain to one ounce of water), or of one or two drops of a solution of lunar caustic (one grain to two ounces of distilled water) will generally be found effectual. The application of the lotion should be made thrice (the drops once) daily. When there is severe pain, however, and the eyelids are red and inflamed, a leech may be applied to each temple. The edges of the lids should be anointed every night at bedtime with simple cerate. The patient should be kept on a light diet, and the bowels kept open if necessary by administration of cathartics. The eyes should be protected by a dark green shade.

Purulent Ophthalmia, or Epythalmia, is the most malignant form of the disease. It sometimes attacks individuals who have been collected together in large numbers under faulty hygienic conditions, and breaks out occasionally in large schools of young children. The symptoms in the earlier stages resemble those of catarrhal ophthalmia, but they rapidly increase in severity, and in the course of twenty-four or thirty hours the eyelids become of a deep-red color, and swollen to such an extent that the patient cannot obtain a glimpse of any object, or even tell whether it be day or night, and believes that he is blind. There is acute pain, which shoots from the eye to the corresponding cheek, forehead, and temple; and from between the swollen lids there is a constant discharge of thick, purulent fluid, which, if applied even in minute quantity to a healthy eye will cause purulent inflammation. There is also generally considerable constitutional disturbance. The affection, if unchecked by treatment, causes ulceration with perforation of the cornea, and, in some cases, sloughing of the whole of the transparent membrane. In the latter case, there will, of course, be complete loss of vision; with slight ulceration even, the sight, though not destroyed, will in most cases be seriously impaired.

The subjects of purulent ophthalmia are usually pallid and weak, and should not be treated on any lowering system; the strength ought to be kept up by good, but easily digestible food. Beer, wine, and in very bad cases brandy may be given in moderate quantities. The most useful medicinal agents are quinine and opium. The local treatment consists in incising the mass of swollen membrane, and applying some strong astringent, as lunar caustic. The eyes are then to be frequently syringed with a solution of alum. Early and skilful medical attendance is very necessary in purulent ophthalmia; but much also depends upon the nursing. The eyes must be frequently bathed, the face kept clean, and above all great care must be taken to wipe away at once the purulent discharge, as it will communicate the disease to any healthy eye with which it happens to come in contact. The affected eye should be covered by a layer of cotton-wool fixed by a bandage; this covering should be frequently renewed, and when removed should at once be burnt.

OPOSSUM.—An animal, about the size of a large cat, which is seldom found in the

Eastern markets but is much liked and much sought after in the South and South-west. Hunting it is a favorite amusement at the South, especially with the negroes, who are extremely fond of its flesh in the Autumn, when it is fat, tender, and flavored like that of a sucking-pig; the sport begins after dark, and is prosecuted with the assistance of a few dogs, torches, and axes for felling the trees in which the animal takes refuge. It is in best condition after the first frost has ripened the persimmons, and about that time it is found occasionally in the markets. The full grown opossum is about as large as a ten-pound pig. It should be dressed as soon after having been killed as possible, and never purchased when at all stale.

Prepare, cook, and serve like Rabbit or Roast Pig. A good stuffing for it is made by pounding the liver and heart with about the same quantity of bacon and mixing with it two or three teaspoonfuls of chopped parsley, a piece of grated nutmeg, salt and pepper, and six small onions fried in butter.

ORANGE.—There are many varieties of this most delicious, wholesome, and refreshing fruit. The largest and best are from Florida, and sell at the highest prices. The Havana oranges are equal in flavor, but have a thick and rough rind; the pulp of either is very juicy and delicious. The Maltese oranges have also a very thick and spongy rind, and are sometimes almost juiceless. The Sicilian fruit, commonly called Messina oranges, have a thin rind and a sour taste, but are usually most abundant and cheap. The Florida and West India oranges are in market from October till April, and those from the Mediterranean from January until May, after which periods they lose flavor and become dry and spongy.

The *Seville* or *bitter orange* is of the same variety as the sweet, but it cannot be eaten raw, and is used only in marmalades, candy, etc., and for the same purpose as the lemon. It is not brought to this country to any considerable extent.

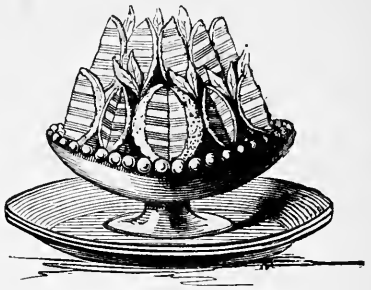
Essence of Orange-Peel. (*See* ESSENCE.)

Fool (Orange).—Mix the juice of three Seville oranges, three eggs well beaten, a pint of cream, and a little nutmeg and cinnamon; sweeten to taste. Set the whole over a slow fire, and stir it till it becomes as thick as cream, but do not let it boil; then pour it into a dish and set it by till cold. This is an excellent dessert dish.

Fritters (Orange).—After having stripped the outer rind from the oranges, remove carefully the white inner skin, and in slicing them take out the seed; dip the slices into batter prepared as for ordinary fritters, and fry them in hot lard or butter to a pale brown; let them be very dry. Serve them heaped high upon a folded napkin, and strew sifted sugar over them.

Ice-Cream (Orange). (*See* ICE-CREAM.)

Oranges Filled with Jelly.—This is one of the fanciful dishes which make a pretty appearance on a supper table, and are acceptable when much variety is desired. Take some very fine juicy oranges, and with the point of a small knife cut out from the top of each a round about the size of a shilling; then with the small end of a tea or egg spoon, empty them entirely, taking great care not to break the rinds.



Oranges Filled with Jelly.

Throw these into cold water, and make jelly of the juice, which must be well pressed from the pulp, and strained as clear as possible. Color one-half a fine rose color with prepared cochineal, and leave the other very pale; when it is nearly cold, drain and wipe the orange rinds, and fill them with alternate stripes of the two jellies; when they are perfectly cold cut them into quarters, and dispose them tastefully in a dish with a few light branches of myrtle between them. Calf's feet or any other variety of jelly, or different blanc-manges, may be used at choice to fill the rinds; the colors, however, should contrast as much as possible.

Salad (Orange).—Take off the outer rinds, and then strip away entirely the white inner skin from some fine oranges; slice them thin, removing the seeds and thick skin of the cores; strew over them plenty of white sifted sugar, and pour on them a glass of rum or brandy; when the sugar is dissolved serve the oranges. Powdered sugar candy used instead of sugar is an improvement to this salad; and the substitution of port, sherry, or Madeira for the brandy is often considered so.

Syrup (Orange).—Select ripe and thin-skinned oranges; squeeze the juice through a sieve, and to every pint add a pound and a half of powdered loaf-sugar; boil it slowly and skim as long as any scum rises; then take it off, and when it becomes cold, bottle it and secure the corks well. Two tablespoonfuls of this syrup mixed in melted butter make a good sauce for plum or batter pudding. It also imparts a fine flavor, especially to punch; and is so useful and so easily made that no housekeeper should be without it.

Tincture of Orange-peel. (*See* ESSENCE.)

Wine (Orange).—To each gallon of water allow three and a half pounds of loaf-sugar; boil them together, and take off the scum. When cold add (for each gallon of water) the juice of twelve or fourteen good oranges, and one-third of the peel cut thin. Let it stand for twenty-four hours. Then work it with a piece

of toast spread with yeast. Let it stand two days, and take out the peel before putting it into the cask. The addition of the juice and rind of three or four lemons is considered by some a great improvement.

ORANGEADE.—This is made in precisely the same way as lemonade, simply substituting oranges for lemons, and using less sugar. It is very useful in a sick-room, as affording a variety in the beverages of feverish patients.

ORGANDIE.—A species of muslin or cotton fabric extremely light and nearly transparent. It is used only for ladies' dresses, etc. The French is the best.

ORGEAT.—A beverage made of syrup of almonds mixed with water that has boiled and become cold, in the quantity most agreeable to the palate; a tablespoonful of the syrup in a tumbler of water makes a very agreeable drink. Syrup of almonds may be made thus:—Blanch and pound in a Wedgewood mortar a pound of Jordan almonds and one ounce of bitter almonds; add a tablespoonful or two of orange-flower water. Mix a pint of rose-water with a pint of clear water, add this to the almonds, and pass the whole through a lawn sieve. Then boil three pints of clarified syrup, and when it boils pour in the almond-mixture and let the whole boil one minute; when cold, put it into bottles and cork tightly. To make it quickly for immediate use, pound the almonds as above; mix them with a quart of water, one of milk, and one of clarified syrup or capillaire; pass through a sieve.

ORMOLU.—A name given to an alloy of 52 parts zinc and 48 copper, so colored as to represent burnished gold. Furniture ornamented with it came into fashion in the reign of Louis XV, and until lately attained a prodigious popularity. At present it is sought after only by the rich virtuosi.

ORTOLAN.—The little bird which is called ortolan in this country is commonly known as the *snow-bunting*, or *white snow-bird*. It is delicious eating, but bears only a slight resemblance to the ortolans which are so famous in European gastronomy and which are fattened in great numbers by a peculiar process especially for the table. The season for the American ortolan begins in December, but it is much better and fatter in January and February. It may either be broiled or roasted.

Broiled Ortolans.—Clean and wash thoroughly in cold water; spread some butter over them inside and out; put on a gridiron over a clear fire with the inner side down, and broil till done, turning it over when one side is brown; when done, season with salt and pepper, and serve on toast. It will take about ten minutes to broil them.

Roast Ortolans.–Dip some oysters in melted butter and then roll them in bread-crumbs seasoned with pepper and salt, and put one in each bird after it has been cleansed and washed in cold water. Roast them about twelve minutes before a good fire, basting with butter and water; dish on toast, and baste freely with melted butter.

OTTER.—This animal is now scarce except in the far north and west, and is seldom offered in the market, especially for food. The flesh, however, is quite good eating and should not be rejected when it can be obtained; the only objection to it is that it has a somewhat fishy flavor. But this is not rank enough to be disagreeable except in a very old otter. Prepare, cook, and serve in the same way as Rabbit.

OVERSHOES.—This is perhaps the most common of the numerous terms applied to the india-rubber shoes designed for wearing over the ordinary ones in wet weather. Where the ordinary shoes are of proper stoutness it is best to wear no overshoes at all; but when these latter are worn they should be worn only out of doors and left off immediately on entering the house. *Never wear overshoes in two widely-different temperatures on the same day.* Carelessness in this respect is one of the most fruitful causes of winter colds and their long train of ills. Another objection to overshoes is that if worn long at a time they "draw" the feet to an extent which is often painful and sometimes productive of frost-bite.

OXALIC ACID.—Poison.—*Symptoms:* Great distress of the stomach. *Treatment:* give a tablespoonful or two of pulverized chalk or magnesia, in a little water or milk. If not at hand, give slacked lime, even plaster from the walls ground fine, will help. Vomiting usually takes place. If it does not, produce it by giving warm water. Do not use the stomach pump or give alkalis.

An organic acid found present in many plants; it gives the acidity to sorrel and rhubarb, hence these plants are used as articles of diet. The oxalic acid of commerce is drawn from these and other plants, and having great cleansing properties is in almost constant use in the household for removing stains from clothing, for cleansing marbles, polishing brass, etc. It is one of the most deadly of poisons if taken in any quantity, and as it bears a close resemblance to Epsom salts care should be taken to have it kept where no mistake can occur.

OXALIS.—A beautiful winter and spring flowering bulb belonging to the family of Cape Bulbs. They flourish either in pots in the window or out of doors. The culture is the same as that of Ixia (which see). In pots the soil should be sandy peat and leaf-mould, and the pots should be well drained.

Among the choice varieties are: *O. Boweana*, which should be potted in September; it produces large clusters of bright red flowers for several months. *O. Carnosa*, should be allowed to dry off during the winter and bedded out in summer, when it will bloom profusely (flowers pink) for about four months. *O. Floribunda*, should be treated in the same way. *O. Capium* (yellow flowers); pot in October. *O. Deppii*, summer-bloomer, lilac-rose flowers; does well bedded out. *O. Luxula* (pink) and *O. Luxula alba* (white), are very pretty varieties; pot in September. So are: *O. Alba, Cupea, Elegans*

Elongata, *Flabefolia*, *Hirta*, *Hirtella*, *Lesiandra*, *Multiflora*, *Palmata*, and *Speciosa*. The *O. Versicolor* is the finest of all; it has flowers white, with yellow eye, and rosy pink or crimson outside. Plant six or eight large bulbs (the largest do not exceed a pea in size) in a five inch pot. The plants are a mass of bloom from January to April.

OYSTER.—When spawning, oysters are milky, watery, and poor; and are unwholesome food. The months of spawning are May, June and July; but they require a month longer to fatten, and are seldom in good condition before September.

Wholesale dealers usually have four qualities or sizes of oysters for sale. The best are known as *extras*, the second best as *box*, and then follow *cullings* and *bushels*. Retail dealers usually open them and sell them by the hundred, gallon, or quart, in any quantity desired. Other dealers make a large business of pickling them for home and foreign consumption, and packing them for inland places.

The largest oysters are not always the best, especially for eating raw and for stewing; those of medium size are generally preferred by epicures. Nor are those found in clusters as good as the single oysters. Oysters are not good when dead. To ascertain whether they are or not, as soon as opened and when one of the shells is removed, touch the edge of the oyster gently, and, if alive, it will contract.

Broiled Oysters.—Wipe them dry, sprinkle them with salt and pepper, and broil them on a wire gridiron over a clear, hot fire. In dishing, put a small piece of butter on each. The oysters are often dredged with flour, or bread-crumbed, after being seasoned; this forms a crust, and is thought to preserve the juices.

Catsup (Oyster).—Open one hundred oysters and preserve all their liquor; add to them one pound of anchovies, three pints of white wine, and one lemon sliced with half the peel; let this boil gently half an hour; then strain it through muslin, add to it cloves and mace, a quarter of an ounce each, and one grated nutmeg; let it boil a quarter of an hour more, then add to it two ounces of eschalots. When cold, bottle it with the spice and eschalots. This is rather expensive, but it gives a delicious flavor to white gravies and sauces, and is an excellent condiment for cold meats.

Curried Oysters.—Drain the liquor from a quart of oysters, and put it into a saucepan; mix a quarter of a pound of butter with two tablespoonfuls of flour, and stir this into the liquor; add one tablespoonful of curry powder. Let the whole come to a boil; put in the oysters; boil up once, and serve hot.

Fried Oysters.—Select the largest and fattest oysters to be had; place them in a colander and let them drain half an hour, and then wipe them dry; dip them one by one in beaten egg, and roll in bread crumbs; fry to a crisp brown in plenty of hot lard. Serve with tomato catsup. The oysters are greatly improved if dipped a second time in the egg and bread-crumbs after an interval of half an hour.

Omelette (Oyster).—Chop into small pieces half a dozen large oysters. Throw a pinch of salt upon them and let them stand in their own liquor for half an hour. Beat six eggs, the yolks and whites separately; the former to a smooth thick paste; the latter to a stiff froth. Add to the yolks a tablespoonful of rich stock, pepper and salt to taste, and then lightly stir in the whites.

Drop into a hot pan a lump of fresh butter the size of a hen's egg. When it is thoroughly melted, and begins to fry, pour in your egg mixture, and add, as quickly as possible, the oysters. Do not stir; but with a broad-bladed omelette-knife, lift, as the eggs set, the omelette from the bottom of the pan, to prevent it from scorching. In six minutes, it will be done.

Place a hot dish, bottom upwards, over the omelette, and dexterously turn the pan over, bringing the omelette with the brown side uppermost upon the dish. Eat without delay.

Patties (Oyster).—Line some small patty-pans with rich puff-paste, and make covers of the same; pinch and trim the edges, and bake in a brisk oven. Drain a quart of small oysters from their liquor; put into a sauce-pan an ounce of butter and a teaspoonful of flour; shake them round over a gentle fire, and let them simmer two or three minutes; throw in a little salt, pepper, and half a teaspoonful of pounded mace, then add by degrees two or three tablespoonfuls of rich cream; let these boil, and pour in the strained liquor of the oysters; next add the oysters and keep at the boiling-point for a couple of minutes. Raise the covers from the patties and fill them with the oysters and their sauce; replace the covers and serve at once before the juice has had time to soak through the crust.

Another way is to prepare the oysters, etc., as above; let them just come to the boiling-point and fill the patties (not baked); then put in a quick oven and bake twenty minutes.

Pickled Oysters.—Take out the oysters, and for every quart of the liquor add a teaspoonful of black pepper, a pod of red pepper broken into bits, two blades of mace, a teaspoonful of salt, two dozen cloves, three tablespoonfuls of white wine, and half a pint of white vinegar. Simmer the oysters gently in this five minntes, then take them out and put them into jars; then boil the pickle, skim it, and pour it over them. Keep them in a dark, cool place, and when a jar is opened use up its contents as quickly as possible. Oysters pickled in this way will keep three or fourweeks.

Pie (Oyster).—I. Line the pie-dish half way up with good pie-crust; fill the dish with pieces of stale bread, place a cover of paste over this, and bake about fifteen or twenty minutes in a brisk oven. Take off the crust; have ready some oysters prepared as for patties, fill the pie with them, and put on the crust. Serve at once.

II. Line a pie-dish (a deep soup-plate will

answer as well) with a good puff-paste; lay an extra layer around the edge of the dish, and bake in a brisk oven. When done, fill the dish with oysters; season with pepper, salt, and an ounce or so of butter; dust over a little flour, and cover with a thin crust of puff-paste. Bake quickly; when the top crust is done the oysters should be. Serve promptly, as the crust quickly absorbs the gravy. This pie is excellent cold, and and is an admirable dish for picnics or for travelling.

Poulette (Oysters a la).—Prepare a sauce by working together butter and flour, and thinning it with warm chicken broth to the consistency of thick cream. To each tureen, add the yolk of an egg, stirred in. Season to taste with salt and lemon juice. Keep this warm.

Wash the oysters, stew them till the beards curl, in equal parts of any light white wine and water, remove them and serve in the sauce prepared as above.

Raw Oysters.—The best way to serve raw oysters is on the "half-shell." Wash the out sides of the oysters; open them, detaching the flat shell; then detach them from the deep shell, but leave them on it. Serve five or six on a plate with quarter of a lemon in the centre. Eat with salt, pepper and lemon-juice, or vinegar.

In serving them without the shells, the most attractive way is in a dish of ice made by freezing water in a tin form shaped like a salad bowl.

Roast Oysters.—Wash and wipe the oysters (in the shell); lay them in a quick oven, on the top of the stove, or in the coals; when they open they are done. Pile in a dish or in a pan and send to table, or take them out and lay them on toast, pouring over all the liquor that accumulates while opening them, with a little butter melted in it, and seasoned to taste.

Scalloped Oysters.—Separate two quarts of oysters from their liquor; pound very fine eight crisp crackers, or grate a loaf of stale bread butter a deep pie dish, put in a layer of crumbs, and then a layer of oysters, and so on till the dish is filled; have the top layer of bread-crumbs thicker than the others, and stick bits of butter over it. Pour over it a teacupful of the oyster liquor, or oyster liquor and milk mixed in equal quantities. Bake in a moderate oven thirty or forty minutes. Pour in a glass of champagne before cooking, if you care to.

Steamed Oysters.—Lay some oysters in the shell in some air-tight vessel, placing the upper shell downwards so the liquor will not run out when they open. Set them over a pot of boiling water (where they will get the steam), and boil hard for twenty minutes; if the oysters are open then they are done, if not, steam till they do open. Serve at once and eat hot, with salt and a bit of butter.

Stewed Oysters.—Separte a quart of oysters from their liquor, and set the latter in a sauce-pan over the fire, seasoning with a little salt and pepper; let it just come to a boil, and add a teacupful of milk. Stir together, boil up once, and then put in the oysters, with a large tablespoonful of butter, rubbed smoothly with the same quantity of flour. Stew gently a few minutes: tastes vary regarding the time. Serve at once, with oyster crackers or crisp cream crackers.

OYSTER-PLANT (Salsify).—A vegetable with a grassy top, and a long, tapering, white root, somewhat like a carrot, which, when cooked, has a flavor very similar to that of the oyster. The tops, when young, are sometimes used as greens, but the root is the best portion of the plant, and furnishes an excellent dish throughout the winter. In the cultivation of the oyster plant, a good, deep, mellow soil is needed, as the roots extend deep into the ground. The beds should be in an open situation, and the seed sown in the spring in drills about six inches apart and half an inch deep; after planting, smooth the bed nicely with the back of the spade or with a light roller. On coming up, if the plants are too thick, they should be thinned to three or four inches intervals. In the autumn, when the roots are dug, let them be exposed to the air for a few hours, and then pack them separately in dry sand, whence they may be taken for use during the winter. As sold in the markets they are usually bound up in bundles of half a dozen roots together.

Boiled Oyster-plant.—Wash the roots, scrape off the outside skin, and throw them immediately into cold water to prevent them from turning black: cut them into lengths of three or four inches, and when all are ready put them into plenty of boiling water, with a little salt, a small bit of butter, and a couple of tablespoonfuls of white vinegar or the juice of a lemon; they will be done in from three-quarters of an hour to an hour. Try them with a fork, and when perfectly tender, drain, and serve them with melted butter, or with rich brown gravy.

Fried Oyster-plant.—Boil the roots tender, as directed above, drain, and then press them lightly in a soft cloth; throw them into a tolerably thick batter; take the pieces out separately and fry them in plenty of hot lard to a light brown; then place in a colander to drain; dish, sprinkle fine salt over them, and send to table hot.

Or, after boiling, mash the roots to a smooth paste, make them into round cakes, dip them in beaten egg and then in bread-crumbs, and fry as before.

Stewed Oyster-plant.—Scrape the roots, and cut them into pieces one inch long; put these into a sauce-pan with hot water enough to cover them, and stew till quite tender; turn off nearly all the water, add a teacupful of milk, and stew ten minutes after it begins to boil; cut a tablespoonful of butter into bits, roll them in flour, and add them to the stew; pepper and salt to taste; then boil up once, and serve hot.

P

PÆONY.——The familiar name of a number of species of highly ornamental garden plants, which blossom through several weeks of the early part of the floral season. The paeonies are divided into two groups, those which are herbaceous and those which are shrubby; but the woody stems of the latter (commonly called Tree Paeonies) are of a herbaceous character, with very large pith. The several sorts may be cultivated in the open air, covering the plants in winter in the colder latitudes, and where heavy snows might break the branches, with a perforated barrel, cask, or box, a method that secures the flowering for the next season, which sometimes fails. In pot culture, the chief point is not to allow the plants to start suddenly into growth and push their flower-buds immaturely. If kept in the shady part of the greenhouse or conservatory, and not too near the window in the parlor the display of flowers will be longer preserved. The best soil for them is a good loam mixed with a little leaf mould; and in the garden a good loamy soil, with occasional prunings of the plants, will be found the best mode of cultivation. The paeony is easily propagated by division of the roots and by seeds; and cuttings may be taken in August or September (with a portion of the old wood attached). In selecting the seed for sowing, the smaller ones in the capsules are the best.

Herbaceous paeonies.—The common red paeony used to be found in every garden, its large and brilliant red flowers rendering it very conspicuous, and delighting all lovers of gorgeous colorings. It is only a few years since the white variety was introduced and shortly afterwards the pink; now over a hundred distinct varieties are given in the catalogues. Among the choicest of them are the following:—*Alba Plenaia*, double flower, white; *Albicans Plena*, rosy pink; *Amabilis*, outer petal rose color, inner ones creamy white; *Baron Rothschild*, pale rose; *Duchesse de Nemours*, rose lilac; *Duchesse d'Orleans*, outer petals violet-rose, centre, salmon-buff; *Festiva*, white shaded to carmine in the centre; *Maidens Blush*, bright pink; *Pompadoura*, dark crimson; *Pomponia*, purplish pink, salmon centre; *Pattsia*, purplish crimson; *Queen Victoria*, rose; *Rubra Striata*, richest rosy crimson; *Tenuifolia*, funnel-shaped leaves, flowers deep crimson; *Virginialis*, pure white; *Whitteyi*, very fragrant, white with yellow centre.

Tree Paeonies.—There are many varieties of these, but after the poppy-flowered and the double blush they differ but little. They bloom in May and are always ornamental. *Elizabeth* and *Roi Leopold* are magnificent varieties.

PAINT.—(To Clean.) Scour with a soft brush, using warm (but not hot) soap-suds; wash the soap off immediately with old flannel dipped in clear water, and wipe dry with a linen cloth. The entire process should be gone through with quickly, so that the water will not dry upon and streak the paint. (*See* CLEANING.)

To Remove Paint.—Apply either spirits of turpentine or benzine, with a piece of woollen cloth; the turpentine may afterwards be gotten rid of by continuing the friction with a clean piece of cloth, or, if necessary, follow it up with soap and water or spirits of wine. When paint is suffered to get hard and dry, it is very difficult to get rid of it entirely, but by perseverance with either of the above solvents it may generally be removed.

PAINTING.—Painting as applied to house-building consists in the application to woods and other materials of artificial colors compounded with oil, oil and turpentine, or water. It is founded upon the power possessed by oil and varnishes and white lead, of preventing the injurious action of the atmosphere upon wood, iron, stucco, and even stone, while at the same time it is capable of considerable decorative effect.

In painting woods, especially pine or deal, the knots must first be killed; otherwise they are constantly giving out turpentine, and thus destroying the effect of the paint. The composition for this purpose is made with red and white lead, ground fine with water on a stone, and mixed with warm double glue size; it should be brushed on the knots while warm. A second coat of white lead ground in oil with the addition of a dryer, as red lead or litharge (one quarter as much of the dryer as of the white lead) will generally be necessary unless the wood has been thoroughly seasoned. This should be allowed to become quite dry, and then should be rubbed down with pumice-stone. After this *knotting* is completed, the next process is to *prime*. The paint for this is composed chiefly of white lead mixed with a very small quantity of red lead in *raw* linseed oil; it should be laid on very thin, so that a pound ought to cover eighteen or twenty square yards. Another coat is generally laid on afterwards still thinner than the first; and in this condition the work is said to be *primed and one coat*, ready for painting, which will require two coats more. All the nail-holes and other irregularities should now be filled up with putty, and the whole surface brought to the desired condition of smoothness. After this, a regular coat of paint of the intended color is laid on, and in a day or two subsequently the

finishing one. When a large proportion of turpentine is used in this last coat, the paint looks dull and has a delicate bloom; this is called *flatting*.

The colors and combinations of colors possible in painting are practically innumerable, and, with the methods of preparing them, constitute too large a subject to be entered upon here. (A few of those most commonly employed are given under PIGMENTS). Those processes, a knowledge of which can probably be utilized in the household, are treated of in their proper places.* (*See* KALSOMINING, STAINING, VARNISH, and WHITEWASH.)

The best time for painting the exterior of buildings is late in the autumn or during the winter. Paint then applied will endure twice as long as when applied in early summer, or in hot weather. In the former it dries slowly and becomes hard, like a glazed surface, not easily affected afterwards by the weather, or worn off by the beating of storms. But in very hot weather the oil in the paint soaks into the wood at once, as into a sponge, leaving the lead nearly dry, and nearly ready to crumble off. This last difficulty, however, may be guarded against, though at an increased expense, by first going over the surface with raw oil. By painting in cold weather another serious objection to painting in summer may be avoided, namely, the collection of small flies on the fresh paint.

Measurement of Painter's Work.—When this kind of work is not done by the job it is done by measurement. In the latter case, the work is always measured by the yard superficial, and the dimensions are taken in yards, inches, and tenths. Every part passed over by the brush is measured, consequently the dimensions must be taken in a line that girts over the moulding, etc. Ornamental and carved work are charged extra.

PALSY. (*See* PARALYSIS.)

PANADA.—This is excellent for the sick-room. Break into a sauce-pan a piece of bread a little larger than an egg; cover it with water, or milk and water; boil five minutes, stirring all the while. Then add a saltspoonful of salt, one ounce of butter, and a couple of raw egg-yolks. Stir well together, and serve in a bowl.

Chicken Panada.—Make according to above receipt, reducing the quantity of bread, and substituting for it the white meat of chicken minced very fine. The egg-yolks may be omitted or not.

Cracker Panada.—Split some Boston crackers, and pile them in a bowl in layers, sprinkling sugar and a little salt over each; cover with boiling water, put a close top over the bowl, and set in a warm place where it may steep about an hour. Eat from the bowl with sugar, and flavor with a little nutmeg.

PANCAKES.—Commonly used for dessert; made by frying a thin batter in large cakes. They are buttered and served hot; sometimes spread with raspberry jam; in either case they are rolled and sifted with powdered sugar.

For Dessert.—Mix a pint of flour with half a pint of milk and half a teaspoonful of salt; add four eggs, and beat until very light; add gradually a pint of milk; grease a small frying-pan, and put in some two or three spoonfuls—barely enough to cover the pan. When done, roll each one separately, and place across a platter, kept hot in the mouth of the oven; send to the table when the platter is covered, with a little butter over the whole. Have another plate ready to follow the first; serve with plain butter, sugar, and cinnamon. (*See* BUCKWHEAT CAKES and SLAP-JACKS.)

Apple Pancakes.—Make a batter as for common pancakes, adding to it a few apples, peeled, cored, and chopped very fine; these must be stirred up in the batter each time a pancake is taken from it. Apple renders the pancakes light and delicate; but too much makes them fall to pieces in frying.

German Pancakes.—Beat half a pound of butter to a cream; mix with it half a pound of flour, half a pound of sugar, the yolks of twelve eggs, and a pint of lukewarm cream; beat the whites of the eggs to a stiff froth, and add them, together with a little powdered cinnamon and lemon-peel chopped very fine. Fry the pancakes on one side only, and place them in a pile, one above the other, so as to form a cake, sugar and cinnamon being strewn between each layer. The pile should be cut downwards like a cake, and served with wine or jelly sauce.

PANSY.—Also called *Heartsease* and *Garden Violet*. This flower is a universal favorite, and a garden is seldom found in which it does not fill some quiet, shady spot with its rich, velvety blossoms. It is a perennial—that is, it dies down every year when nipped by the frost and springs up again in the spring from the old roots or from self-sown seeds. The spot selected for a pansy bed—the plants are too small to plant separately—should be shady, or at least protected from the noonday sun; and the soil should be rich and mouldy. Pansies are gross feeders, and can scarcely be manured too strongly; they will bloom better if watered at least once a week during the summer with a tablespoonful of guano dissolved in a gallon of water. Water should also be given them very freely every day. Pansies can be obtained of every color, from the deepest purple and brightest yellow to the faintest buff, and when grouped have a very pretty effect. They may be grown from seeds by starting them in pots early in the spring, and afterward transplanting them to the garden; but the easier way is to procure the plants of the florist already in growth.

PAPER-WARE.—Under the name of *Japanese paper-ware*, a species of household utensils have been recently introduced, embracing tea-trays, waiters, pans, pitchers, bowls, slop-buckets, churns, etc., etc. They are made of

* *How to Paint* (New York, S. R. Wells), is an excellent little manual in which a practical painter gives all the instruction on the various branches of the art that an amateur can apply.

compressed paper, glazed on the surface so as to resemble earthenware (how much better it would be if decorated according to its own character, instead of being made a poor imitation of anything !), and are low-priced and light, and said to be water-tight and durable.

PAPER-HANGINGS.—Of all wall-coverings, paper-hangings are the most popular, and are used everywhere. The styles and qualities are numberless, the best being French importations, though the American papers are very nearly as good, and somewhat cheaper in the same grades. The artistic principles upon which wall-papers should be selected are pointed out in the article on DECORATION. The more complicated the colors, the more expensive is the pattern, each color requiring a separate impression. For the more expensive papers a lining paper is required, especially for crimsons. In choosing papers, when economy is an object, short patterns should always be selected, as they match with much less waste than longer ones ; or, better still, plain neutral tints. Avoid green papers, as they are frequently colored with Paris green, an arsenical pigment, which is poisonous. The paper is manufactured of various widths, though twenty-one inches is the most common, and is sold by the *piece* or *roll* of twelve yards. The French papers are only eighteen inches wide.

Measuring. Measure the circumference of the room, multiply the feet by twelve, and divide by the number of inches in the width of the paper ; this will give the number of breadths ; then take the height of the room in feet, measuring from the cornice to the base-board, and allowing for the matching of the pattern; multiply this by the number of breadths, and divide by thirty-six. **II.** Multiply the circumference of the room in feet by the height in feet, and divide the result by three times the width of the paper in inches. Either way will give the number of pieces that would be required if there were no windows, doors, or mantel-piece. Deduct for these in their proportion.

The price of paper-hangings is from twelve cents to three dollars per *piece;* and of borderings, from three to thirty cents a yard. An excellent American satin paper can be had at one dollar per *piece.*

Paper-Hanging. — The first step in hanging paper is to have the wall well cleaned, the old paper or whitewash being scraped off, and all cracks filled with plaster of Paris and allowed time to dry. Then a *sizing*, made by adding eight ounces of dissolved glue to an ordinary pailful of hot water, should be applied to the wall with a whitewash brush, particular care being taken to touch every part, especially the top and bottom. Allow it to dry a little ; then with a sharp pair of scissors cut the blank strip from the left side of the paper, the blank strip on the other side forming the lap; or, if heavy flocked paper, both edges should be cut and the paper put on the wall without overlapping. Next, having cut the paper of the required length, lay it face downward on a table or board, and apply the paste (made as below) with a paste-brush or common whitewash brush ; spreading it evenly, and as quickly as possible. Then place it in position on the wall, beginning to press it gently down to the same with a damp cloth, at the top, following down until the bottom is reached. Continue in this manner, being careful to match the figures, until the whole is covered ; then cut out the border and paste it on, and the work is complete. It is usual to have the strips of paper a little longer than is necessary, so that they can be cut off neatly at the base-board after they are put on, as the base-board is not always straight or parallel with the ceiling.

Paste for Paper-Hanging. — For a room which will require eight or nine pieces of paper, four pounds of flour will be sufficient. This should be beaten to a stiff batter with clear cold water. Then, having a vessel full of boiling water at hand, and a vessel containing the batter, large enough to contain two pails full, pour the boiling water upon the batter, stirring it briskly, and it will be observed that the batter will swell and its white color change to a yellowish hue. When this occurs, stop pouring in the boiling water, and a fine smooth paste will be found, suitable for any description of paper hanging. Some persons add alum to the paste, others resin, but it will be found that the scalded flour will stick as well, and no injury can occur to the paper, as is frequently the case when using flocked paper-hangings, with alum or resin in the paste. Another method of making paste, but not as certain of good results, is to mix the flour with cold water to the consistency of milk, and heat it to the boiling point over a slow fire.

PAPIER MACHÉ.—As its name implies, this consists of paper mashed and softened and mixed with gum; it is pressed into certain forms and covered with an ornamental surface. It makes excellent and very pretty tea-boards, trays, etc., and was formerly much used in the manufacture of household ornaments, such as cornices, picture-frames, and the like. But in most of the articles of furniture, which are now sold under this name, the foundation, instead of being of *papier maché,* is of wood, as for instance chairs, tables, etc. Paper would not be strong enough for such articles, and hence is not available; but it is absurd to call them *papier maché.* The surface of the *papier maché* is generally covered with a thick black varnish, in which are embedded pieces of mother-of-pearl: and when the whole is thoroughly hard and dry, it is rubbed until the pearly surface appears, after which it is painted or tinted in a fanciful manner. On the whole, the rapid substitution of other decorative materials for *papier maché* is not to be regretted. Although occasionally a piece has been found in good taste, such has not been the rule.

PARAFFINE.—A waxy substance, obtained by the distillation at a low temperature of coal-tar, peat, petroleum, and other similar sub-

stances. Its most abundant source is Boghead coal, from which it is now extracted in enormous quantities for the manufacture of candles, which are superior in every way to those made of the finest wax or the best stearine.

The term is also applied to an oil which is one of the products of the distillation, and which is used to some extent for burning in lamps. It is a very dangerous source of illumination.

PARALYSIS.—This term is generally used to signify a loss of motion in some part of the body; but as the nerves supplying most parts of the body are of a mixed character—that is motor and sensory—the idea usually conveyed implies also a loss of sensation. Paralysis may, however, be *motor* or *sensory*, or both. Moreover, it may be *complete* when there is a total loss of power and sensation, or *partial*, when these are partly, not wholly, lost. Sometimes the word partial is used to imply that only certain parts of the body are affected, but for this purpose the term *local* seems preferable. General paralysis implies that the whole body is affected, but the term "general paralysis of the insane" expresses one particular form of malady which is an accompaniment of insanity. The two most common forms of paralysis, and the only ones which it is worth while to treat of specially in a book of domestic medicine, are *hemiplegia* and *paraplegia*. Hemiplegia is that form of paralysis which affects one lateral half of the body without the other side being affected: hence hemiplegia is right or left. Paraplegia on the other hand means paralysis of the lower half of the body; but there is no right or left paraplegia — it must affect both sides, if not quite equally, at all events to some extent.

Hemiplegia.—This is much the most common form of paralysis. In most cases it is produced by an injury to one side of the brain, and then if the right side of the brain is injured, the left side of the body is affected and *vice versa*. But all forms of hemiplegia do not depend on brain mischief—some arise from injury to the spinal cord, affecting only one side of it; and so we may have *cerebral* or brain hemiplegia, and *spinal* hemiplegia. Any influence which interferes with the due supply of blood to a certain area of the brain will cause hemiplegia: *softening*, *cerebral hemorrhage*, a *clot of fibrine* obstructing the vessels, *disease* of the coats of the vessels from fatty change and epileptic attacks will cause this form of paralysis. An ordinary attack of apoplexy, when the patient has recovered from the shock, leaves the individual in this state; it is, in short, a symptom of mischief in the brain, and not the disease itself. Hemiplegia may come on suddenly without any warning or insensibility, as when it is caused by a very small clot; more generally the two symptoms are present, and when sensibility returns the patient finds that he has lost the use of his arm and leg. Sometimes there is stiffness or rigidity of the arm and leg as well as loss of power, and this seems to depend on the nature of the injury to the brain; in most cases, however, the limbs lie useless, flaccid, and, if raised up, drop at once when left unsupported.

Treatment.—This is, of course, a disease in which it is necessary to have the best medical advice. When the patient has recovered somewhat from the first shock, friction may be applied to the extremities, or a galvanic current, or rubbing with rough towels after a stream of cold water has been applied; this should not be done until three or four weeks after the disease has begun, and then only when the patient is in a fit state for it. Improvement may be known by the patient being able to perform simple movements, or raise the limb a short distance from the side; but for many weeks or months the strength of that side will be much impaired, and even in favorable cases complete restoration can hardly be expected. In every case the treatment and chance of recovery depend upon the nature of the original injury.

Paraplegia.—This denotes loss of power, as we have said, over the lower extremities and lower half of the body, and is always dependent upon some change in the nervous system, and generally some disease in the spinal cord. The causes are: inflammation of the spinal cord or its membranes; cancer of the cord, or any other tumor pressing upon it or growing into its substance; fracture or dislocation of the bones forming the spinal column; a wound of the spine; and hemorrhage into or softening of the spinal cord. It may also come on in cases of hysteria without there being any true paralysis at all. The symptoms are in most cases tingling and numbness of the legs and feet, with occasional twitchings, followed by loss of the power of moving them; sensation is generally interfered with but not wholly gone. If the paralysis be due to an accident it may appear at once; if to cancer or a tumor, the symptoms may come on gradually; if to inflammation, the paralysis may come on in a very few days, and often terminates fatally from its extending upwards and involving vital parts. In most cases the bladder is also paralysed, so that there is retention of urine, which constantly dribbles away. The patient generally loses power over his bowels, and the stools pass away unconsciously. If the affection spreads upwards the abdominal and intercostal muscles become involved, and there is great distress in breathing; presently the arms are paralyzed and the patient dies of suffocation, as he cannot expand his chest. This happens chiefly in inflammatory cases, while if the paralysis be due to other causes, the parts affected will be below the seat of injury and the sufferer may go on for months and even years—though in most cases he is an invalid and can hardly help himself about at all. Those cases which arise from a syphilitic state of the constitution may generally be much benefited, if not cured, by the use of iodide of potassium. The danger of paraplegia depends upon the cause. Any

fracture or dislocation of the spine is always serious, but even then life may be prolonged for months; as a rule the higher the injury the greater the danger. A tumor of the cord will gradually make its way onwards and finally kill. Inflammation of the cord is generally fatal within a week or a fortnight; otherwise a slow recovery may be looked for. In hysterical cases, the patient is generally of the female sex, very emotional and excitable in her nature, and not unfrequently the subject of deep religious impressions. There is no true disease of the spinal cord, but the patient will not or cannot exercise her will to move the limbs.

Treatment.—In all cases of paraplegia, the patient should lie on a water-bed, if possible, so as to prevent the formation of bed-sores, which are very liable to form in this disease. Great cleanliness must be observed, and any excreta removed when passed. A draw-sheet must be placed beneath the patient, and removed when required. The urine must be drawn off by a catheter, at least twice a day, if the patient cannot pass it, or if it dribbles away; often, too, it is a good thing to wash the bladder out night and morning with warm water. The feet should be kept warm in hot flannels, but the heat must not be too great, or the feet are very liable to blister in this affection. The diet must be light and nourishing, and modified to suit the patient's palate in long standing cases. No bleeding must be used; no mercury is to be given, except in cases of a syphilitic origin, and not always then; no blisters need be applied, as they do no good. For acute cases, an ice-bag may be laid along the spine, and this gives relief sometimes. In chronic cases, when the paralysis is made out clearly to be incurable, the only thing one can do is to make the rest of life as easy as possible for the patient. In hysterical cases, treatment is of much avail. It is too common for people to look upon a case of hysteria as synonymous with a case of shamming; but this is a totally wrong view. It is very common among both sexes, and especially amongst young women, to find cases in which the emotional faculties seem developed out of proportion to the intellectual ones; such people are what are ordinarily called of a nervous and excitable temperament; they often indulge in emotional excitement, and this often assumes a religious aspect, varying in its development according to the people who associated with the patient in ordinary life. Intense mental worry, great grief, loss of a relation, and numerous other causes tend to produce an excitement of the emotional faculties, while at the same time they are not duly balanced by a well-taught intellect; this is what is meant by "giving way to the feelings." In some cases, this goes on to such a degree that the will is not exerted by the patient, and cannot be exerted unless some strong stimulant, as electricity, etc., is given to the nervous system. At one time, the voice is lost, or an arm is palsied; in another case the leg is paralyzed, and it is put down often as hip-joint disease. And these cases do not occur because the patient won't use the limb; it is because she cannot, unless you apply a shock. The best treatment for such cases is not to oppose their views, nor, on the other hand, sympathize with them too much. Daily reading some sensible book, removing all trashy novels, trying to engage the mind on some amusing topic, avoiding all excitement, and some light occupation, as sewing, knitting, or wool work, will be most likely to do good. Cold bathing, electricity for a short time every morning, and firm but kind dicipline, will promote a cure.

Palsy.—Sometimes called "shaking palsy" (Paralysis Agitans). It consists in a want of power of using the muscles, and also of keeping them at rest. The shaking commonly begins by affecting the hands and arms, but later it may affect any part of the trunk or limbs. Very often the head is affected; later it extends even to the jaws. This agitation is increased by any mental effort, especially to call into play the muscles affected. The disease is progressive, and by-and-by the entire body becomes affected, so that the patient can hardly walk, being always disposed to run. All this time the faculties are unimpaired, and the patient is acutely sensible of his misfortunes, which often sadly interferes with his occupation. His bodily powers become impaired after a time, from the inability to sleep or take food in comfort, on account of the incessant shaking. These cases commonly occur in men advanced in life, and in them little benefit is to be hoped for; but it may occur earlier, and then it can be alleviated, if not cured, by the judicious use of strychnine, iron, and galvanism, especially of the continuous current.

PAREGORIC ELIXIR.—Poison, if in *very* large doses. *Symptoms*, sleepiness. *Treatment*, same as in opium, *which see*. The compound tincture of camphor; a popular medicine, used as an anodyne and antispasmodic; it allays cough in cases of asthma and catarrh, and relieves slight pain in the stomach and bowels. It is often given to children under the belief or pretence that it contains no opium, but the modern paregoric elixir contains one grain of opium in each half ounce of the elixir, and is therefore unfit for indiscriminate domestic use. The practice, once common, but now happily dying out, of giving it to infants as an anodyne, is a most dangerous one. A teaspoonful of paregoric is the full dose for an adult.

PARLOR. (*See* FURNITURE.)

PARQUETRY.—Inlaid woodwork in geometric patterns, generally composed of two different tints, and generally used for floors. As formerly made, this was rather expensive decoration, but in the modern form of wood carpeting, etc., it is economical and can be made very tasteful and pretty. (*See* FLOORS.)

PARROTS.—The parrot family comprise six divisions; the principal are the Macaw, which includes the cockatoos and the toucan; the Parrots, including the paroquet; and the Lories.

The *Macaws* are distinguished from the true parrots by having the cheeks bare of feathers, and the tail very long. They are extremely graceful in form and motion, have rich plumage, are lively and very noisy, occupying a great part of their time in discordant screeching. In the hall or drawing-room they are extremely ornamental, from the beautiful metallic reflections which play over their plumage. The macaws are mostly natives of tropical South America, where they nestle in decayed trees, which some specially excavate, as do our woodpeckers. The food of the macaws is chiefly dry seeds, or the fruit of the palm, and in the coffee-growing lands they eat coffee-berries; but here, in confinement, we must nourish them differently. The red and yellow macaw must have white bread soaked in milk, and moistened biscuit; it is injured by meat, pastry or sweetmeats. It has admirable powers of articulation, while the blue and yellow macaw imitates the mewing of cats, barking of dogs, bleating of sheep, etc., with great facility and accuracy. The great green macaw—of a beautiful bright grass-green, diversified with blue and red, and shaded with black or deep blue—is valued for its variety, as well as for its beautiful plumage and exceedingly docile and amiable temper; it will repeat almost any lesson immediately, call persons whom it is accustomed to see by their several names, and is fond of children—as the other macaws are not.

The *Cockatoos* may be recognized by the beautiful crest of feathers on the head. The name is derived from the loud and distinct call-note of some of the species, sounding like "Cock-a-too," very distinctly uttered. These birds come from Australia and the Indian isles; they live on seeds and fruits, and can crack the stones of the hardest fruits; their color is mostly white, tinged with rose-red or sulphur-yellow; they are not capable of speaking more than "cock-a-too." The great white cockatoo should have a wire bell-shaped cage, or be chained to a perch in the open air, if the weather be warm. Feed it with all kinds of nuts, mealy seeds, and bread and milk. The sulphur-crested cockatoo is a most agreeable pet — playful, jocular and affectionate. The great red-crested cockatoo is the largest and handsomest of the species. Some of the feathers of its crest are six inches long, of a rich orange color at the base. This is not so gentle a bird as the more common cockatoo. It has a loud, trumpet-like voice, with which it shrieks out its own name, and calls "Derdeney," clapping its wings the while like a cock, whose crow, as well as the cluck of the hen, and the various cries of different animals, it readily imitates. It is not a delicate bird, and may be easily reared and kept.

The *Toucans* are known at once by their enormous bills, which are curved and hooked, and toothed at the edges, and are thus formidable weapons. In their native haunts in Guiana and Brazil they go in little flocks of from six to ten; and, although heavy fliers, will reach the tallest forest trees, where they are fond of perching. They will eat almost anything. Their mode of eating solid food is very peculiar—when the morsel is presented they take it on the point of the bill, throw it upwards, and then catch it in the open mouth so dexterously that it goes at once into the aperture of the gullet, and is swallowed without difficulty. The toucans are so sensible to cold that they dread the night air, even in tropical climates; it is necessary, therefore, to keep them in a warm temperature. They do not speak—their utterance is merely a kind of croak. The preacher toucan has a singular cry, which it almost constantly utters. It is easy to tame and keep.

The *True Parrots* are less elegant than the macaw tribe—less splendid in color than the lories—but are excellent imitators, and can articulate words and sentences very distinctly. The ash-colored or grey parrot is one of the commonest, largest and most tractable of its tribe. It is about the size of a pigeon. It is an African bird; it will eat anything; but the best food for it is bread and milk. The memory of the grey parrot is most extraordinary; it will retain entire verses and passages of considerable length. Some grey parrots live to fifty, sixty, seventy, or even a hundred years. It moults regularly once a year.

The *Paroquets* are smaller than the true parrots—more slender, and elegantly proportioned, with long, pointed tails; several from Africa and Asia have rings round their necks. Thus the paroquets may easily be distinguished from the parrots, which are all stout, heavy birds, with short and even, or slightly rounded tails.

The *Lories* are so named from the call-note of some of the species. They are gorgeously beautiful, but exceedingly difficult to preserve in a cold climate. There are many varieties, but here we shall only mention the purple-capped lory—a very rare and costly bird,—of resplendent tints. It utters "Lorie," squeaks incessantly, and as hollow as a ventriloquist; imitates everything, and in clear, round tones; but it requires to be constantly amused and caressed. It is a truly wonderful bird—the most highly endowed of the whole parrot race.

In keeping parrots it should be borne in mind that they require large, roomy cages, and the larger birds open perches; the eating and drinking vessels should be *not* of zinc or pewter, but of glass or porcelain; coarse sand should be sprinkled on the floor; and in warm weather the cage should be cleaned out every day, in cold weather twice a week. Carefully guard all kinds of parrots from *cold*, but give them plenty of sunshine and fresh warm air. Let them out amid flowers, shrubs, or in a greenhouse; and, in teaching them, never threaten to punish, but repeat the lesson frequently, and reward with choice morsels. Take care the bread and milk be not sour, and vary it with biscuit, grain, nuts, and fruits; and for the small birds, add hemp and canary-seed and millet. Give no meat; and be very chary of pastry and sweets.

PARSLEY.—This is the herb most used in cookery and for garnishing. There are two sorts, the plain-leaved and the curly. The latter is much to be preferred, being prettier whether growing or on the dish, and more easily distinguished from the *Aethusia*, or fool's parsly—a species of hemlock which is poisonous. The best mode of cultivating it is by seed, sowing where it is to remain any time between the middle of March and the middle of June; and if the stalks are cut down occasionally, to prevent their seeding, it will last for several years. The seed should be buried about an inch deep. Parsley is always in season except at short intervals through the winter months; if dried and preserved in bottles from which the air is excluded, it retains its flavor a long time. Besides its usefulness for cooking and garnishing, parsley chewed has the property of destroying any fœtor in the breath, or the smell imparted to it from spirits, onions, or other substances. The roots also are edible, boiled like carrots, but are not much used.

Fried Parsley.—This is an excellent garnish for fish, etc. To prepare it, wash and pick the parsley and throw it into clean water, and then into boiling fat, when it will instantly become crisp and must be taken up.

PARSNIP.—This wholesome and nourishing root has the advantage of being in season during the winter and spring months when other table vegetables are scarce. It contains a good deal of sugar, and this gives it a peculiar sweetish taste which many like, but which to some is very insipid. Those are sweetest which are grown in rich soils, while those grown in stiff clayey soils have a much milder flavor. In cultivating, sow the seeds in the spring in rows eighteen inches apart, burying the seeds about an inch deep; thin them out to intervals of six or eight inches. Among the best varieties are the "Guernsey" and the "Large Hollow Crown." Parsnips are improved by standing until after heavy frosts and in dry soils; they keep perfectly in the ground until Spring, but they must then be dug before the new growth begins.

Boiled Parsnips.—According to their size and the time of year (they require long cooking in cold weather) parsnips will take from 20 minutes to more than an hour to boil. Every speck or blemish should be cut from them after they are washed and scraped, and the water in which they are boiled should be salted and well skimmed. If they are large, slice them down the middle before boiling; if young and tender, boil them whole. When quite tender, dish them, and serve either whole (with butter spread over them) or mash like potatoes, adding a little milk and butter, and seasoning with pepper and salt.

Buttered Parsnips.—Wash and scrape, and then boil as above till tender. Slice lengthwise into pieces about a quarter of an inch thick, season with pepper and salt, and put them into a sauce-pan with three tablespoonfuls of melted butter and a little chopped parsley; put over a moderate fire until the mixture boils; then arrange the parsnips on a dish, pour the sauce over them, and garnish with parsley, and serve.

Fried Parsnips.—I. Prepare as for buttered parsnips. Dredge the slices with flour, and fry them in hot lard, turning when one side is browned. Drain off the fat, season with pepper and serve hot.

II. Boil them until they are about half done, lift them out and let them cool; slice lengthwise in thick slices, sprinkle them with fine salt and white pepper, and fry them a pale brown in good butter. Serve with roast meat or dish them under it.

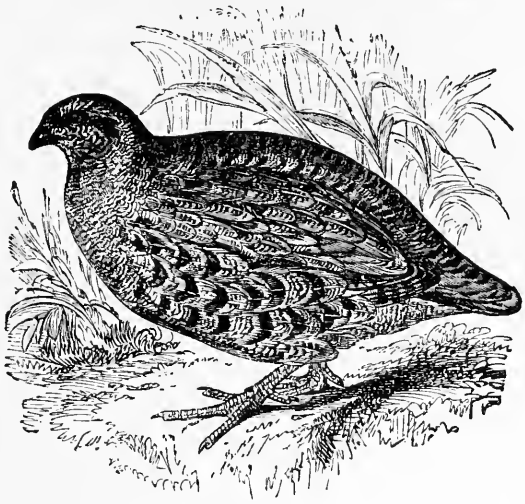
Wine of Parsnips.—Wash, scrape, and slice the parsnips very thin; for every three pounds of the parsnips allow a gallon of water; boil an hour and a half, and strain the liquor without bruising the parsnips; then measure the liquor and make up any deficiency (under the original quantity) with boiling water. To each gallon of the liquor add three pounds of sugar and one ounce of crude tartar; when nearly cold, put it into a cask, add a tablespoonful of yeast, and keep it in a warm place; stir daily until the fermentation subsides, which may be in ten days or a fortnight, and then bung it down. It may be racked and fined in three or six months, and bottled in six months more. Wine made thus is thought to be but little inferior to Madeira of equal age. Spirits may be added if it is liked strong.

PARTRIDGE.—It is said that we have no genuine partridge in this country; and it is certain that the birds sold as partridges in our markets are very different from the English partridge. Moreover, the birds known as quails at the North are called partridges at the South, while the southern pheasant is the ruffed grouse, which is the Northern partridge.

The *partridge*, *pheasant*, or *ruffed grouse*, are very plentiful in our markets from about the 1st of September to the 1st of January; but they are best in October and November. After January 1st it is not safe to eat them, especially if the winter has been very severe, as they are then deprived of their ordinary food and are forced to feed upon the leaves of the poisonous evergreens. They have been found with their crops filled with the green laurel, and if their flesh be eaten under such circumstances the result may be serious. An old partridge has a white bill and bluish legs; when young the bill is of a rather dark grayish color, and the legs are yellowish. As long as the rump does not turn blue, the bird is fresh enough.

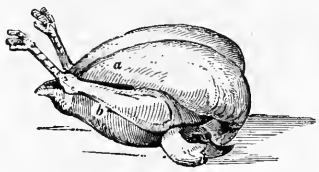
Baked Partridge.—Clean and wash out the inside with soda-water, afterwards rinsing it in fresh water. Cut off the claws to about half their length; truss it, and cover its breast with a thin slice of fat salt pork, tying the pork on with twine. Place the partridge on its back in the baking-pan with a piece of butter the size of a walnut on it; set it in a quick oven, baste often, and serve when rather underdone.

Boiled Partridge.—Clean the partridges, and tie down the legs very closely. Put a pound of salt pork into a pot and boil it an hour; then put in the birds and boil 20 minutes. Serve with parsley and butter, or with bread sauce.



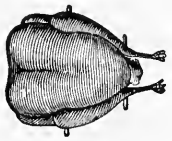
Partridge.

Broiled Partridge. — For broiling select young birds; clean, wash, and split down the back; soak in cold water half an hour; then wipe dry on a towel, season with salt and pepper, and broil on a gridiron over a hot fire, turning them when brown on one side. Serve on a hot dish, spreading butter liberally both inside and outside. Quails are broiled in the same way.



Partridge trussed with head.

Roast Partridge. — I. Prepare, stuff, and truss as directed for chickens; lard well with fat pork; and roast at a hot fire, basting well with butter and water. They require 25 or 30 minutes to cook. To make the gravy, put the drippings into a saucepan with a piece of butter about the size of an egg, and a little flour and hot water. Let it boil up once, and serve in a boat.



Partridge trussed without head.

II. (With Bacon). — Prepare as before. Spread thin slices of corned ham or pork over the entire bird and bind them on with twine; roast before a hot fire about 40 minutes, basting it at first with butter and water and then with the drippings. Dish with the bacon (or ham) laid about the body of the bird. Skim the gravy, thicken with browned flour, and season with pepper and the juice of a lemon; let it boil up once.

PASSION FLOWER.—The common passion flower (*P. cærulea*) is a native of Brazil, where it grows to the thickness of a man's arm, and the height of thirty feet. Here it is quite a moderate sized garden plant. The flowers are large and beautiful, blue externally, white and purple within; they continue in bloom but one day. *P. incarnata*, the flesh-colored passion flower, is found from Ohio to Florida. The former bears an edible berry, pale yellow, of the size of an apple, called Granadilla. Other species also bear eatable fruit, as the Water Lemon, Sweet Calabash, etc. All are easy of cultivation. They will grow in any good garden soil, and are propagated by cuttings.

PASTE.—Directions for making an excellent sticking-paste for paper-hanging and similar purposes are given under PAPER-HANGING.

Paste for Labels on Bottles, etc.—An excellent paste for fixing labels on glass, wood, or paper may be prepared by dissolving 11 parts, by weight, of common glue, soaked a day before in cold water, 7 parts of gum arabic, and some rock candy, in 56 parts of water, at a gentle heat, with continued stirring until the mass is uniform. Labels brushed with this and dried will adhere firmly, if simply moistened with saliva when used.

PASTILLES.—Pleasant odoriferous pastilles for fumigating purposes may be made as follows: gum benjamin, one ounce; cloves, half an

ounce; cinnamon, two drachms; a stick of calamus; and mucilage enough to make the parts adhere together. Mix, and then make into shapes and dry.

Mr. Piesse, in his excellent "Art of Perfumery," considers that the burning of woods, barks, or aromatic seeds, in pastiles, produces far from a pleasant odour; and that charcoal itself is inodorous, and does not in any way interfere with the fragrance. Mr. Piesse prefers the following recipe: willow charcoal, quarter of a pound; benzoic acid, three ounces; oil of thyme, carraway, rose, lavender, cloves, and santal, of each fifteen drops. Before mixing, dissolve half an ounce of nitre in a quarter of a pint of rose water; with this solution wet the charcoal, and then dry it in a warm place. Next pour over it the mixed oils, and stir in the flowers of benzoin: mix by *sifting* (better for mixing powders than the pestle and mortar), then beat the whole up in a mortar with gum water to bind it.

PASTRY.—Under this term are included pies, tarts, and all productions of cookery in which flour-paste is a principal ingredient. Directions for making these are given under the respective articles; and we shall only refer here to the practice, becoming more and more common in cities, of purchasing pastry at the baker's instead of making it at home. This of course is sometimes necessary, as on special occasions when social duties call for some unusual display, or on ordinary occasions where the regular cook is not also a pastry-cook. When neither of these reasons applies, home-made pastry is not only more economical but also more wholesome than that bought at the shops, where the butter and other ingredients used are nearly always inferior. They look very well, but the stomach discovers the imposture, and its owner pays the penalty. Only the best butter, etc., should be used in making pastry, especially when children are to eat it.

PÂTÉ. (*See* PATTY.)

PATTY.—Patties are made of rich puff paste, and baked in patty-pans, with a piece of bread inside; after the crust is done, the piece of bread is removed, the proper contents are inserted, and the patty is served either hot or cold. Almost any kind of meat, or poultry, or fish can be used.

Lobster Patties. — Make these with the same seasoning as for oysters, adding a little cream and a very small piece of butter.

Oyster Patties.—Prepare the pastry as directed under *patties*. Thicken, over boiling water, half a pint of cream with two even tablespoonfuls of flour rubbed with one ounce of butter; add half a teaspoonful of mace, a teaspoonful of salt, and a pinch of cayenne. Stew, until plump, a quart of oysters in their own liquor, with an even teaspoonful of salt; drain, and stir them into the hot cream; fill the patties and serve. (*See* also under OYSTER.)

Podovies or Beef Patties.—Shred underdone roast beef, with a little of the fat; season with pepper and salt, and a little shalot or onion. Make a plain paste, roll it thin, and cut it in shape like an apple-puff; fill it with the mince, pinch the edges, and fry to a nice brown.

Turkey Patties.—Mince some of the white part of roast turkey; season with salt, white pepper, nutmeg, and a little grated lemon-peel; add a little cream, and a very little melted butter; fill the patties and warm, or serve cold.

Chicken patty can be made in the same way.

Veal Patties.—Mince some veal that is not quite done with a little parsley; season with salt, a grate of nutmeg, and a bit of grated lemon-peel; add a little cream and gravy, let it stew gently a few minutes, then fill the patties. This dish is improved by the addition of a little minced ham.

PAW-PAW.—The paw-paw or *custard apple* grows wild in great abundance in the Southern and Western States. In form and color it resembles a small cucumber when ripe. Its pulp is almost too luscious to be agreeable, although it is liked by many; the flavor is like that of custard, the color is saffron, and it is quite full of hard seeds which look like those of the water-melon, but are larger. It is best when touched by frost; but some like it best when boiled in a green state. The paw-paw ripens about the middle of September. They are not often found in the markets.

PEA.—The garden pea is one of the best and most extensively used of all our table-vegetables, and is not less popular in Europe than with us. In cultivating, sow the seeds in double rows about four feet apart as soon as the frost is out of the ground; the drill should be about two inches deep. By planting different varieties at proper intervals, a succession of green peas can be secured during the entire summer. Landreth's Extra Early is said to be the earliest for garden use, and the best. Philadelphia Extra Early is also desirable. Little Gem is very dwarf, and of fine flavor, growing only one foot high. Hundred-fold, or Cook's Favorite, is a first-class variety, early and very prolific. Laxton's Supreme is the earliest wrinkled pea, and has the largest pods of any kind. The Champion of England, though a late variety, is very luxuriant and much the best family sort raised. The Marrowfats, though deficient in flavor, are excellent for early summer use. Green peas should always be purchased in the pods, which should feel cool and dry. If closely packed they have a mashed or wet appearance, and a warm feeling, which much injures their natural flavor; and when the shells or pods begin to turn to a lighter shade, or to look rusty, the peas have usually a black spot upon them and are too old to be good. But to have them in the greatest perfection, they should be picked very young and should, if possible, be cooked almost immediately after being taken from the vines. The first new peas that reach the market are generally in small quantities at high prices. They come from the Bermudas about the 1st of

April; from Charleston and Norfolk about the middle of May; from southern New Jersey about the 1st of June; and from Long Island, etc., about the middle of June. They are in season till September.

Large quantities of dry, soaked, and split peas are sold throughout the winter season; the Japan and the "lady pea" are the best varieties. These all require to be boiled with salt meat to give them a flavor.

Boiled Green Peas.—Shell them and soak in cold water until the time for cooking them; then put into salted boiling water and boil them twenty minutes if young and tender, half an hour if old. The English always put in a lump of sugar, which improves both the flavor and the color. When done, drain well, dish, stir in a good lump of butter, season with a little pepper and serve hot.

Stewed old Peas.—Steep them in water all night if very dry, otherwise half an hour will do; put them into just enough water to cover them, with a piece of salt beef or pork; stew gently till the peas are soft and the meat is tender. If the meat is not salt, add salt and a little pepper. Dish them around the meat.

PEACH.—Of this, perhaps the most delicious of all our native fruit, there are a great many varieties, but they are generally classified under two principal names—the freestones and the clingstones. Among the best varieties of the freestones are the early York, Crawford early, rare-ripes, Morris whites, melocoton, and honest John; and of the clingstones, the lemon cling, orange cling, white heath, Oldmixon, late heath, and blood cling. Peaches first make their appearance from the Bermudas about the 25th April, in small quantities and at high prices; from the Southern States about the end of June or first of July; and from lower New Jersey about the 20th of July. They do not appear in large quantities, however, until about the middle of August, when they commence to be plentiful and continue so until the 20th of September; they then gradually decrease until in October and November, only the hard winter peaches are to be found. After this they are found in a dried state. (*See* COMPOTE, JELLY, MARMALADE, PICKLES, PIES, and PRESERVES.)

Brandied Peaches.—Select fine ripe peaches free from bruises, and wash them; allow three-quarters of a pound of sugar to a pound of peaches; use as little water as possible for the syrup; boil the peaches in it ten minutes. When they are done, measure out a pint of white brandy to a quart of the syrup; lay the peaches while they are hot into the cold brandy, and when they are cold put them into a jar, strain the syrup through a fine sieve into the brandy, pour the whole on the peaches and cover up tight.

Candied Peaches.—Make a rich syrup of one pound of granulated or crushed sugar to one gill of water. Heat this over boiling water until the sugar is dissolved. Pare and halve fine ripe, but firm peaches; put them in the syrup in a shallow vessel, as the fruit should be in one layer; cook slowly until clear; drain from the syrup, place on plates and dry in a heater or in a very moderately heated oven.

Placed in the heater belonging to a cooking stove, the fruit will be sufficiently dry in twenty-four hours, to pack in jars.

Plums and cherries may be done in the same way, after stoning. Bartlett pears too are excellent, but do not require so rich a syrup.

Dried Peaches.—Pare the ripe fruit, cut it in large slices from the stone, spread these on wood or cloth, and dry thoroughly in the sun. This will take several days, and they must be brought in or covered over at night. In the Northern and Western States it is generally best to have a small room heated with stoves, in which the fruit can be dried, the sun not being powerful enough. When thoroughly dried, store in bags in a cool dry place. In buying dried peaches choose those that look brown and clean and dry; the whitish colored have less flavor, and the damp ones are seldom good.

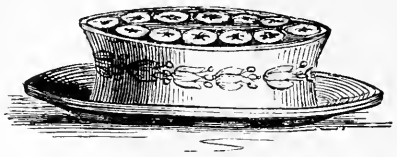
Peach (Leather).—Allow a pound of sugar to a pound of fruit, pare and halve ripe peaches; crack a dozen stones for a peck of peaches, chop the kernels after blanching them, and throw them over the fruit, which must now be put in the preserving pan, heated slowly and boiled to a pulp. Add the sugar (granulated or crushed) and boil until clear; then spread on plates and dry in quite a cool oven until so stiff that it can be eaten from the fingers. Tear the sheets into bits and pack in jars with powdered sugar between the layers. Stretch clean, well-soaked bladder over the top and tie securely; or it may be packed in air-tight fruit cans.

Salad of Peaches.—Pare and slice half a dozen fine ripe peaches, arrange them in a dish, strew them with pounded white sugar, and pour over them two or three wineglassfuls of champagne. Other wine may be used, but champagne is best; persons who prefer brandy can substitute it for wine, using a smaller quantity. The quantity of sugar must be proportioned to the sweetness of the fruit.

Stewed Peaches.—I. Should the peaches not be perfectly ripe throw them into boiling water and keep it just simmering until the skin can be easily stripped off. Have ready half a pound of fine sugar boiled to a light syrup with three-quarters of a pint of water; throw in the peaches, let them stew softly until quite tender, and turn them often that they may be equally done; after they are dished, add a little strained lemon-juice to the syrup, and reduce it by a few minutes' very quick boiling. The fruit is sometimes pared, divided, and stoned, then gently stewed until it is tender.

II. Take a quart of dried peaches, cover them with water, add half a pound of sugar, and stew gently until the peaches are reduced almost to pulp. More or less sugar can be used according to taste. Peaches prepared in this way are an excellent corrective for costiveness.

Suedoise of Peaches.—Pare and divide four fine, ripe peaches, and let them *just simmer* from five to eight minutes in a syrup made with the third of a pint of water and three ounces of very white sugar, boiled together for fifteen minutes; lift them out carefully into a deep dish, and pour about half the syrup over them, and into the remaining half throw a couple of pounds more of quite ripe peaches, and boil them to a perfectly smooth dry pulp or marmalade, with as much additional sugar in



Suedoise of Peaches

fine powder, as the nature of the fruit may require. Lift the other peaches from the syrup, and reduce it by very quick boiling, more than half. Spread a deep layer of the marmalade in a dish, arrange the peaches symmetrically round it, and fill all the spaces between them with the marmalade; place the half of a blanched peach-kernel in each, pour the reduced syrup equally over the surface, and form a border round the dish with Italian macaroons, or, in lieu of these, with candied citron, sliced very thin, and cut into leaves with a small paste-cutter. A little lemon-juice brings out the flavor of all preparations of peaches, and may be added with good effect to this. The better to preserve their form, the peaches are sometimes merely wiped, and then boiled tolerably tender in the syrup before they are pared or split. Half a pint of water, and from five to six ounces of sugar must then be allowed for them. If any of those used for the marmalade should not be quite ripe, it will be better to pass it through a sieve, when partially done, to prevent its being lumpy.

PEA-FOWL.—Pea-fowls or Peacocks are ornamental birds only, for though good for the table, they have such wild habits and eat so much food that they are never kept for the sake of their produce. When old, or even when mature, the pea-fowl is tough and rank; but when young, the flesh is both tender and agreeable in flavor, some pronouncing it superior to that of the turkey. Cook and serve as directed for turkey.

PEA-NUT.—Also called *Earth-nut, Pindar-nut*, and *Ground-pea*. This very common nut is raised in immense quantities in the Southern States, especially in North Carolina, and is sometimes imported from Africa. It is found chiefly in fruit-stores, and after having been roasted, everywhere—in the markets, on the street corners, apple-stands, etc. The fresh or new nuts arrive in our markets from November to June; but they rather improve by keeping, and can be had at all seasons of the year. A valuable oil is expressed from the nut, which is said to be superior to whale-oil as a lubricant for machinery. One of the qualities of this oil is employed in medicine; another is used for illuminating purposes. While a third makes an excellent salad condiment.

PEAR.—The best *summer* pears are the Bartlett, summer Doyenne, Madelaine, Sugar, Bloodgood, Brandywine, and Small Harvest. The *autumn* pears are the Duchesse d'Angouleme, Bartlett, Vergalein, or white Doyenne, Sheldon, gray Doyenne, Seckel, Buffam, Flemish Beauty, Louise Bonne de Jersey, Washington, Bell, etc. The *winter* pears are the winter Nellis, Pound, Columbia, Vicar of Winkfield, Lawrence, and Easter Beurre. The first pears usually appear in June, but are seldom good. The best for eating purposes ripen in August, September, and October. Many of the common kinds are used for baking, stewing, preserving, etc., and a drink called Perry (which see). Several of the winter varieties will keep well through the winter, until April, if stored in a dry cool closet. (*See* COMPOTE and PRESERVES.)

Baked Pears.—Select large, sound pears, not fully ripe; arrange them on a dish with the stalk-end upwards, put them into the oven as the fire is dying down, and let them remain all night. If well baked they will be excellent, and much finer in flavor than those which are stewed or baked with sugar.

Or, cut some large pears in half lengthwise, put them into a deep dish, with a very little water, sprinkle them with sugar, and put a few cloves, or bits of cinnamon, or a pinch of ground ginger among them. Cover closely, and bake till tender in a moderately hot oven.

Or, wash the pears, leave the stems on, put them into a two-quart stone crock with a gill of water and half a pint of sugar; cover the crock with a piece of dough made of coarse flour and water, and rolled about half an inch thick; bake them two hours or more, according to the ripeness of the fruit.

Brandied Pears.—Pare the pears very neatly, boil them in water fifteen minutes, and lay them on an open dish to cool; make a syrup half the weight of the fruit, boil the pears in it fifteen minutes, and again set them to cool; put into the jars, and fill half full of the syrup and the rest with brandy.

Candied Pears.—Peel large white pears, cut off the stem half way; then drop them into cold water, with a little lemon juice, to keep them white. Put cold water in a deep pan, add the juice of a lemon to every two quarts, drop the pears in, and boil gently till quite tender; then take off, drain, and drop in cold water, which is to be changed two or three times without stopping; then drain again, place the pears in a large bowl, and proceed the same as for candied peaches. (*See* CANDIED PEACHES.)

Salad of Pears.—Peel pears of any good crisp flesh variety, cut them in thin slices, and remove the pips and cores; put them in a dish, dust them well with pounded sugar, and mois-

ten with brandy or rum, which may be added in large or small quantity according to taste. This is an excellent dessert-dish, but it must not be made until just before it is served; the sliced pears turn brown if kept.

Stewed Pears.—Pare, cut in halves, and core, a dozen fine pears, put them into a close-shutting stew-pan with some thin strips of lemon-peel, half a pound of sugar in lumps, as much water as will nearly cover them, and should a very bright color be desired, a dozen grains of cochineal, bruised and tied in muslin; stew the fruit as gently as possible four or five hours, or longer, should it not be perfectly tender. Wine may be added if the taste is liked.

Or, if the pears are small, cut out the blossom end without paring or coring, and stew them whole, in enough water to cover them. When quite tender add half a teacupful of white sugar for every quart of pears, and boil ten minutes; then dish the pears, add a few cloves or a pinch of ginger to the syrup, boil ten minutes, and pour over the fruit hot.

PEARLASH. (*See* POTASH.)

PECAN-NUT.—A species of hickory-nut which grows abundantly in the Southern States, especially Texas, and in some parts of the West. It is about an inch in length, of oblong shape, with a smooth, hard shell, and about as large as a common-sized finger. Pecan-nuts are of an agreeable taste, and wholesome, and make an excellent dessert. The fresh nuts begin to come in in December, and are in season till April; they are best when they have been kept a month or two.

PELARGONIUM.—A species of plant very similar to the geranium, under which it is generally included in popular speech. The leaves of the plant are more pleasantly perfumed than those of the geranium, and have no zonal, or horse-shoe markings, but are of a rich vivid green. The flowers are much sought after on account of their perfect coloring; no description can convey an idea of their beauty. There are all shades of scarlet, crimson, pink, purple, and white; the lower leaves, and frequently the upper ones, are veined and blotched with the darkest crimson, purple, and red, beautifully veined with the lighter shades. They are the most showy-flowered of all the bedding-out plants, except the Scarlet Salvia, and should find a place even in the smallest garden. They are propagated both from cuttings and seeds. They require a light, sandy loam, well enriched with cow-manure, and if they are not plentifully supplied with water, their buds will wither away. They need more sunlight than the geranium to bloom in perfection. The different colors and sizes may be grouped together in a bed, so as to produce a very beautiful effect; some of them, however, are tall in growth and produce a good effect planted singly on the lawn. The treatment for indoor plants is the same as for the geranium.

There are hundreds of varieties of Pelargonium, and many novelties are added every season. The following are a few of the best:—*Cloth of Silver*, petals of silvery whiteness blotched with delicate rose; *Belle of Paris*, rich violet crimson, upper petals spotted, an immense cluster of flowers; *Competitor*, black, edged with rose; *Crimson King*, rich crimson, beautifully veined and blotched; *Dr. Andre*, pink and white, petals fringed; *Eclipse*, clear white petals marked with maroon; *Eligible*, pink crimson with white edges and violet markings; *Emperor of Pelargonium*, very large snow-white flower spotted with violet and tinged with rose, petals finely fringed; *Gen. Taylor*, rich crimson blotched with very dark red; and *Niagara*, white, striped and blotched with crimson.

PELISSE.—Originally a furred robe or coat, now a silken coat or habit worn by ladies, mostly as a part of their travelling costume. *Pelisse cloth* is a woolen fabric, twilled and made quite soft; it is usually seven quarters wide.

PENNYROYAL.—A species of mint which grows wild in great abundance in many parts of the United States, and is sometimes cultivated for making an essential oil which is used in medicine. Its odor seems to be very annoying to certain insects, especially ticks and fleas; and in this way it may be made useful. It is generally for sale in the markets during the autumn months, sometimes in large quantities; and it is put up in packages and sold in a dried state at the drug stores. The essential oil is used in medicine for the same purposes as peppermint and spearmint; the reputation of the herb as an abortive is altogether fallacious.

PEONY. (*See* PÆONY.)

PEPSINE.—An organic secretion in the stomach of animals, which is regarded as an active agent in digestion. In all healthy stomachs it exists in sufficient quantity for the accomplishment of its purpose, but in many cases of gastric disorder it must be introduced artificially. The best medicinal pepsine is made from pigs' stomachs and is called *Pepsina porci;* it is free from acid and starch, and has a not disagreeable odor. It should be given during or after a meal. The best way of administering it is in a dose of five to ten grains along with food, and thereafter to take dilute nitric acid, in a dose of five drops, in a wineglass of water, with sugar. In cases of great debility of the stomach, especially in old people, the habitual use of pepsine may render life easy where before it was unendurable. It is also valuable in cases of the regurgitation of half-digested or half-putrid food, and in cases of obstruction at the passage from the stomach to the intestines. After a time, a dose of five grains of salicylic acid may be given to prevent putrefaction of what remains. For it has been tolerably clearly proved that substances which are digested in the stomach are absorbed there, so that if albumen be converted into peptone and there absorbed, there will be no necessity for it to pass on into the intestines, nor will there be time for it to undergo decomposition.

The dilute nitric acid should be taken through a tube. The salicylic acid can be taken as any other powder. Sulphite of soda or of magnesia, taken in doses of from ten to fifteen grains, is also good to arrest decomposition in the stomach.

PEPPER.—This most generally used of all the spices, is the produce of two allied plants (known as *Piper nigrum* and *Piper longum*), which grow chiefly in the East Indies; the part used is the berry dried in the sun. *Black* and *white* pepper are both obtained from the berry of *Piper nigrum;* the former being the entire berry ground, while the latter is made from the berry after it has been deprived of its outer covering or husk. *Long Pepper*, the berry of the *Piper longum*, is not ground, and is not much used at the present day; it is not so aromatic as the black, but more pungent. *Peppercorns* is the name given to the whole berries; the best are those which are not too small nor too much shrunk in drying, but which feel heavy in the hand and sink in water. Pepper is universally employed as a condiment, and from its promoting the secretion of the gastric juice, it aids the digestive powers of the stomach; but even in small quanties, it is hurtful in inflammatory habits. Its use should be prohibited to invalids and children.

Pepper, both black and white, is adulterated with a variety of articles—as the flour of linseed, mustard, wheat, sage, and arrowroot. Also by "pepper-dust," being the sweepings of the floors of the warehouses. These adulterations can only be detected under the microscope, and it is best, therefore, to buy the peppercorns, and grind or powder them at home.

Cayenne Pepper is a totally different substance, and is the most heating and stimulating spice known. (*See* CAYENNE.) The pods of the *capsicum*, from which the cayenne is made, are grown throughout the southern part of the United States; when green they are much used for pickling, and when dried in the sun they are strung and sold in all the markets. Bell pepper (*C. grossum*), is the largest and best variety, and is easily raised from the seeds.

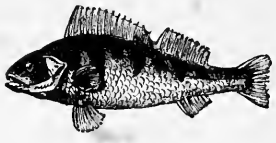
PEPPERMINT.—A variety of mint which is usually found growing wild in damp soils. It is sometimes used in cookery, but its chief use is for distillation in the manufacture of the oil of peppermint, of which great quantities are used by confectioners, druggists, liquor-dealers, etc. It should be gathered in August and September.

Drops (Peppermint.) — Pound and sift four ounces of double refined sugar, and beat it with the whites of two eggs until perfectly smooth; then add sixty drops of the oil of peppermint, beat it well, with a small stick, drop it on white paper, and dry at a distance from the fire.

Essence of Peppermint. (*See* ESSENCES.)

PEPPER-SAUCE. (*See* SAUCES.)

PERCH.—There are numerous varieties of this fish, most of them, however, being known by other names. The best variety, commonly called *black perch*, are in reality black bass,



Perch.

and have been treated of under Bass. They weigh from a pound and a half to three pounds, and are in season during the months of May, June, and July. The *white perch* and the *yellow-bellied perch* are the kinds usually sold as perch. They are in season in the winter and spring months, and so small — they seldom weigh more than a quarter of a pound each— that they are only fit for frying.

Fried Perch.—Clean, wash and dry the fish; sprinkle them with salt and dredge them with flour; and fry to a light brown in hot butter, lard, or dripping. Serve hot.

PERFUMES.—The use of perfumes about the person is, of course, a matter of individual taste; but they are useful as deodorizers in the sick-room, under circumstances when fresh air, which is by far the best means for the purification of a room, cannot be immediately introduced. In such cases the use of perfumes is beneficial, not only because they hide the bad odor, but because they act as a prophylactic in the atmosphere. The odorous substance of flowers is antiseptic in a high degree, and being diffused in an atmosphere charged with foul gases, moderates their poisonous influence. It must be borne in mind, however, that in overcoming a bad odor by an agreeable one, the causes of the former are neither removed nor destroyed. The only really efficient means of removing a bad smell is proper ventilation. Receipts for making the choicer kinds of the perfumes which are within the resources of domestic manufacture are given in the proper places.

PERITONITIS.—Inflammation of the peritoneum, or the membrane which lines the cavity of the stomach and covers the intestines. Its danger varies with its cause. It may be produced by a stab or gunshot wound in the abdomen; these cases are often fatal. Cancer and tubercle may bring it on, but this is generally only a part of the malady, and the chief seat of disease is elsewhere. Any tumor of any organ in the pelvis or abdomen may cause it; stricture, hernia, and ulceration of the intestinal canal will bring it on; and it is often associated with typhoid fever. It is perhaps most often a sequence of child-bearing. The chief *symptoms* of Peritonitis are pain over the abdomen, vomiting, and a raised temperature; the pulse is quick and small, the countenance anxious and sunken, the legs drawn up so as to relieve the pain. The pain is worse on any movement, and is very wearing to the patient. In some

cases of blood-poisoning, as in certain forms of puerperal fever, etc., there may be peritonitis, and yet no pain. Colic, which often comes on in lead poisoning, must not be mistaken for this disease; in the former case, there will be no fever, and the patient will have a blue line around the gums. Some cases of hysteria may simulate peritonitis; here, again, the temperature is normal, and there are the usual signs of hysteria.

Treatment.—Perfect rest in bed must be enjoined; hot fomentations, made as light as possible, must be applied over the abdomen; the weight of the bed-clothes should be taken off the patient as far as possible. Opium must be given to relieve the pain, and for this purpose, large doses are frequently required. Cooling, saline drinks, and iced water may allay the thirst and nausea, while milk and beef-tea must be given every three hours or oftener, so as to keep up the patient's strength. Each case, of course, will vary so with the cause as to require a somewhat different line of treatment; and for this competent medical advice must be sought. Peritonitis often forms a serious complication in cases of typhoid fever. (*See* TYPHOID FEVER.)

PERIWINKLES.—These are small shell-fish, of which several varieties are occasionally found in our markets. They are not highly esteemed as an article of food, being somewhat rank-flavored; but they are sometimes eaten by the poor who live near the coast. They are in season in the summer and fall months. Boil and pickle them like Cockles.

PERRY.—A very pleasant drink made from pears. Any of the commoner kinds of pears will answer, but they must be just ripe without being mellow or in the least degree decayed; when they are not sufficiently ripe an excess of fermentation cannot be prevented, and when they are too ripe the liquor rarely ferments kindly and is exceedingly apt to become sour. In making perry the pears are mashed and pressed in exactly the same way as apples in making cider. The subsequent management of the perry is also the same as cider (*see* CIDER), except that a few days after the liquor is pressed out it should be drawn off from the lees, and fermented in another vessel. An excess of fermentation is prevented by the means used in the making of cider, and the liquor can be rendered bright, if necessary, by isinglass. Perry will not do well in situations where it is exposed to change of temperature; and it should be bottled if it remains sound and perfect at the conclusion of the first succeeding summer.

PETROLEUM.—An exceedingly inflammable oil obtained in a natural state from the earth in various parts of the United States. It does not enter in its crude form into any of the domestic arts, but at least two valuable articles are made from it. (*See* BENZINE and KEROSENE OIL.)

PEWTER-WARE.—Pewter is an alloy of tin, antimony, and lead; but its composition is not always uniform. There are three kinds of pewter in common use, called *plate metal*, *triple*, and *ley*. Plate metal is said to be formed of 112 parts tin, 6 or 7 of antimony, and a small portion of brass or copper to harden it; it is the best kind and is used for making dishes. The sort called *triple* is used for alehouse pots, cheap dishes, spoons, etc., and is composed of lead and tin, with a little brass. The *ley* pewter used for wine and spirit measures has more lead. Lead being a cheaper metal than tin it is the interest of manufacturers to employ as much of it as they can, and, consequently, pewter is apt to contain too much of it. Lead being a noxious metal, danger was apprehended from its employment in this way; and the French government appointed a commission of some very able chemists to examine the subject. They found that, when wine or vinegar is allowed to stand in vessels composed of an alloy of tin and lead in different proportions, the tin is first dissolved, while the lead is not sensibly acted upon by these liquors, except at the line of contact of the air and the liquor; and no sensible quantity of lead is dissolved even by vinegar, after standing some days in vessels that contain no more than 18 per cent. of lead. Hence it was concluded that, as no noxious effect is produced by the very minute quantity of tin which is dissolved, pewter may be considered as a safe material when it contains about 80 per cent. of tin; and, where vessels are intended merely for measures, a much less proportion of tin may be allowed. But the common pewter of Paris was found to contain no more than 25 to 30 per cent. of tin, and the remainder was lead; there is reason to fear that this is also the composition of our common pewter; if so, malt liquor, and particularly porter, always containing more or less acetic acid, cannot fail to dissolve some of the deleterious metal. The use of pewter for any vessels in which food or drink is prepared should therefore be avoided; and in fact the invention of the Britannia and similar wares which make up in superior durability for their slightly greater cost, has now rendered it unnecessary.

PHEASANT.—There is no genuine pheasant in this country, what is called pheasant in the Northern markets being really the ruffed grouse, which is also called partridge at the South. (*See* GROUSE and PARTRIDGE.)

PHLOX.—This is another of the perennials, the beauty of which should secure it a place in every garden. It is perfectly hardy, and its brilliant clusters of flowers, comprising all colors from white to crimson and purple, striped and mottled, have few superiors among hardy plants. It will thrive in almost any soil, but enjoys fresh loam and new quarters every two or three years. It increases rapidly from the roots, and will also grow easily from cuttings or layers. The Phloxes are a large family, containing many species and fine varieties. The latter are numbered by hundreds, and we can only mention here a few of the most desirable. For EARLY SPRING FLOWERING:—*P. Divaricata*, light and dark purple; *P. Nivalis*, white; *P. Stonolifera*, deep red; *P. Tubalata*, pink, white, purple, and eyed va-

rieties. For SUMMER FLOWERING:—*P. Beppo*, purple or crimson; *P. Comtess of Home*, white, crimson eye; *P. Henri Lierval*, purplish crimson; *P. Louis Van Houtte*, striped; *P. Maculata*, red; *P. Madame Wagner*, whitish rose, rosy eye; *P. Rival*, white; *P. Roi Leopold*, white, striped with purple; *P. Speculum*, white, with red eye; *P. Dianthiflora*, rose and white; *P. Hersine*, purple and white; *P. Le Croix de St. Louis*, rose and white; *P. Madame Basseville*, rosy white, red eye; *P. Madame le Cerf*, pure white; *P. Oculata*, lilac, white centre; *P. Osirus*, white, with red eye; *P. Mr. Regel*, violet, purple, and crimson; *P. Souvenir de la Mer*, white, violet centre.

PIANOFORTE (Care of the).—A piano should be tuned at least twice a year by an experienced tuner. If it be allowed to go too long without tuning, it usually becomes flat, and troubles a tuner to get it to stay at concert pitch, especially in the country. Never place the instrument against an outside wall, or in a cold, damp room, particularly in a country house. There is no greater enemy to a pianoforte than damp. Close the instrument immediately after finishing practice; by leaving it open, dust fixes on the sound-board, and corrodes the movements, and if in a damp room, the strings soon rust. Should the piano stand near or opposite to a window, guard, if possible, against its being opened, especially on a wet or damp day; and when the sun is on the window, draw the blind down. Avoid putting metallic or other articles on or in the piano; such things frequently cause unpleasant vibrations, and sometimes injure the instrument. The more equal the temperature of the room, the better the piano will stay in tune.

PICCALILI.—This is a name given to mixed pickles which may contain almost any combination of the vegetables usually made use of for pickling. The following makes an excellent pickle:—Take gherkins, cucumbers, cauliflower, radish-pods, French beans, samphire, celery, white cabbage, carrots, capsicums and button onions. Soak them in brine for twenty-four hours; drain them and dry with towels, then place them in glass cans and pour over them, boiling hot, the following prepared mixture: To one gallon of vinegar add four ounces of bruised ginger, two ounces of whole black pepper, two ounces of whole allspice, three ounces of curry, and half a pint of sweet oil; boil them together for half an hour, and then pour them over the vegetables, having mixed a little turmeric and mustard in a bowl with a small quantity of vinegar, which should also be poured in. Some persons prefer straining the vinegar, but the spice materially improves the flavor of the pickle in keeping; and at last the liquor makes an excellent sauce for cold meats. Put up in glass jars.

PICKEREL.—This fish is known in Philadelphia as "Pike," and in Virginia and the Southern States as "Jack." It is one of the most delicious of the fresh-water fish, being esteemed hardly inferior to trout. When in good condition it is very firm-fleshed, sweet, and well-flavored; it is best in the winter and spring months, from September to March, and during that time is generally quite plentiful in the markets. The pickerel is a long, square-backed fish, with one fin on the back near the tail; the upper jaw has somewhat the appearance of a duck's bill, and the eyes are very small; the

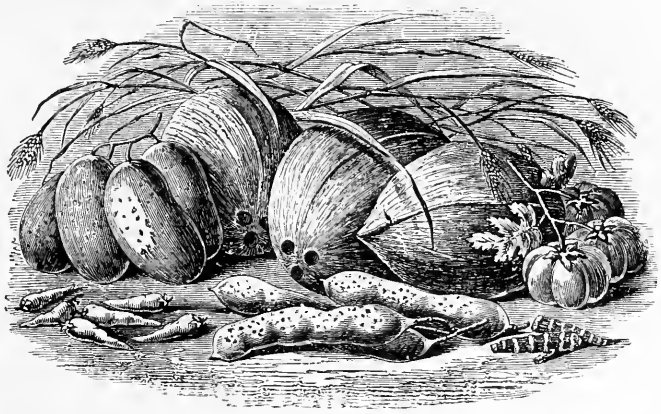
Pickerel.

color on the back is of a bluish gray, and sometimes of a greenish cast; the sides are of a muddy yellow and quite full of dark, irregular marks. There is a smaller variety, called "brook pickerel," which are different in shape and smaller; they are not so desirable as the regular pickerel. Prepare, cook and serve pickerel in the same way as trout. The smaller fish only should be used for frying and broiling, and the larger ones for boiling, baking and roasting.

PICKLES.—With the exception of walnuts, which, when softened by keeping, are the least objectionable of any pickle, these are not very wholesome articles of diet, consisting, as so many of them do, of crude, hard vegetables, or of unripe fruit. Those which are commonly sold in the shops are especially objectionable, as in most cases they are so injured by adulteration as to become dangerous to persons who partake of them often or largely. Color is of great moment in pickling; and the fine green color of many of the prepared pickles is secured by the addition of sulphate of copper, or bluestone, directly to the vinegar, and where this is not done, they are made in copper or brass vessels. A very simple and effective way of testing whether such "greening" has been ventured upon, is to put a few drops of the suspected vinegar on the blade of a knife, or cut the pickles with it; add a drop of sulphuric acid (oil of vitriol), and heat the under surface of the knife over the flame of a candle; the vinegar in evaporating will deposit the copper upon the knife-blade, if any be present. The best plan, however, is to make the pickles at home, for then they can be relied upon as at least pure.

For home pickling we subjoin a few leading rules. Acids dissolve the lead contained in the tinning of saucepans, and corrode copper and brass; consequently, if vinegar is kept in them for any length of time, it becomes highly poisonous. This danger, therefore, is easily avoided by heating the liquor in a stone jar on a stove; but *glazed* stone jars should not be used for pickles, as salt and vinegar dissolve the lead which is in the glaze. Scalding or parboiling the articles to be pickled in salt and water will cause them to absorb the vinegar much sooner; but this does not add to their

crispness. In this case the articles should be cold and *quite dry* before they are put into the vinegar. Should the vinegar become thick, it may be advisable to pour it off the pickles, boil it up again, and pour it back. Use the strongest vinegar for pickling, for that of inferior quality is useless; it should be scalding hot, as raw vinegar becomes ropy, and will not keep; but it should be remembered that neither vinegar, nor any other fermented liquor, can be boiled without loss of strength. Pickles should be kept from the air, otherwise they soon spoil. They should, likewise, be touched only with a dry wooden spoon or ladle; and as it is an object to keep the jars as full as possible, small jars should be from time to time filled up from larger ones. The pickles should always be covered with vinegar, at least two inches above



their surface. The least quantity of water, or a wet spoon, put into a jar of pickles, will spoil the contents.

Barberries.—Take barberries, when not quite ripe, pick out the stalks, and preserve the finest sprigs, which should be tied together in bunches, as they may be wanted for garnishing; wash them in salt and water carefully, and set them in a sieve to drain; place the berries and the branches of sprigs in separate jars, and pour over them a pickle made of two pounds of common salt and a gallon of water; fill the jars to the brim, skim the pickle as long as any scum rises, then pour it off and fill the jars again, and tie over. The acidity of the barberry renders vinegar unnecessary.

Beans.—Pick the young string or snap beans just before they change color, and leave them quite whole. Let them stand two weeks in a brine made of two pounds of salt to a gallon of water, stirring them up from the bottom every day; change the water then for fresh and let them remain in that another day; they are now ready for pickling. Line a kettle with a thick layer of green vine-leaves, put the beans into it, add a half-teaspoonful of powdered alum for every gallon of water, fill the kettle with cold water, put another layer of vine-leaves over the top, and cover with a close-fitting lid; simmer over a slow fire for five or six hours, without allowing it to come to a boil. When the pickles are of a bright green remove the leaves, and drop the beans into very cold water, leaving them there while the following pickle is prepared:—To one gallon of the best cider vinegar add a teacupful of sugar, three dozen peppercorns, three dozen cloves a dozen and a half of allspice, and a dozen blades of mace; boil five minutes, then put the beans into a stone jar and pour the vinegar over them scalding hot. Set away, closely covered. Two days afterward scald the vinegar again and return to the pickles, and repeat this process three times more at intervals of two or three days. Then cover over tightly, and set in a cool place: they will be ready for eating in a couple of months, but improve with age.

Radish-pods are often pickled along with the beans, and it improves them. The pods should be gathered just before maturity.

Beet-roots.—Select roots of blood-red color; wash them well, boil them till tender; then peel them and cut them into cross slices, not too thin; put them in layers into jars with a little mace, whole pepper, cloves, horse-radish, salt, and bruised ginger, and fill up with the best vinegar. Tie the jars closely with bladder.

Cabbage (Red).—Take a large closely-grown cabbage, strip off the outside leaves, which cut in thin slices into a dish, sprinkling salt over them. Cover them with a cloth, and let them lie twenty-four hours. Next drain the cabbage on a sieve, and put it into a clean jar with allspice, whole pepper, and sliced ginger; pour over it cold vinegar, and tie it closely over; a little bruised cochineal will brighten the red color, but is not requisite. The jar should be completely filled.

Cabbage (White).—Take off the outside leaves, quarter it, cut out the stalk, shred the cabbage and sprinkle it liberally with salt; let it stand a day, then put it into a jar, and pour over it, boiled but cold, spiced vinegar, which will insure its crispness, though it will not keep so long as when pickled with boiling vinegar. A little turmeric may be added.

Capsicums, or Red Pepper.—Soak green capsicums three or four days in a strong brine, drain them, put them into jars with mace and allspice, and fill up with cold boiled vinegar. Red capsicums will not require soaking. *Chilies* may be pickled in the same way.

Cauliflower.—Choose a hard, white cauliflower; pull it into small pieces, which put into a stewpan with salt and water, and boil. Then take out the pieces, dry them before the fire, and pour on them spiced vinegar: a little turmeric will give the cauliflower a fine yellow color, and will also improve the flavor.

A nice spiced vinegar for cauliflower, or any similar pickle, may be made as follows:—To one gallon of vinegar, add a teacupful of white sugar, a tablespoonful of celery seed, a dozen blades of mace, two dozen white peppercorns, a tablespoonful of coriander-seed, a tablespoonful of whole mustard, and some bits of red pepper. Boil five minutes.

Celery.—Prepare a pickle of an ounce and a half of salt, half an ounce of ginger, and as much whole white pepper, to each quart of vinegar, and set it to boil. Having picked and washed, and cut into small pieces, fine fresh celery, put it into the boiling pickle, and when the whole has boiled two minutes, put it into dry stone jars; or let it cool, and then put it into bottles. It will remain good for a long time, and the vinegar will make good salad-dressing. A few button onions may be thrown into the vinegar.

Cherries.—Leave about an inch of their stems on some fine, sound cherries, which are not over ripe; put them into a jar, cover them with cold vinegar, and let them stand three weeks; pour off two-thirds of the liquor and replace it with fresh vinegar; then, *after having drained it from the cherries*, boil it whole with an ounce of coriander-seed, a small blade of mace, a few grains of cayenne, or a teaspoonful of white peppercorns, and four bruised cochineals to every quart; the spices should be tied loosely in a piece of muslin. Let the pickle become quite cold before it is added to the cherries. In a month they will be fit to use. The vinegar which is poured from the fruit makes a good syrup of itself, when boiled with a pound of sugar to the fruit, but it is improved by having some fresh raspberries, cherries, or currants previously infused in it for three or four days.

Cucumber.—I. Select small cucumbers—none should be over a finger in length; they should also be perfectly sound. Pickle them in the manner previously directed for Beans; but the cucumbers may be kept either a week or a month in the brine, according as they are liked salty or otherwise. Soft ones when taken from the brine should be thrown away.

II. (Grated.)—Pare and halve full-grown cucumbers, take out the seeds; grate, strain, and press the pulp until the water is nearly extracted. Season highly with pepper and salt, mix with vinegar to taste; seal in small bottles.

III. (Sliced.)—Slice large cucumbers lengthwise and boil an hour in just enough vinegar to cover them; set them aside in the hot vinegar. Then make a strongly-spiced vinegar (adding a pound of sugar to each gallon), put the cucumbers into it, and stew them two hours. This pickle is ready for use as soon as made.

Elder Pickle.—Cut the tender shoots of the elder-tree, peel them, and soak them twelve hours in brine; drain and dry them; then boil in two quarts of vinegar, two ounces of whole ginger, two ounces of whole black pepper, and the same of allspice; pour it boiling upon the elder shoots in a jar, and cover up.

Eschalots.—For a quart of ready-peeled eschalots, add to the same quantity of the best pale white wine vinegar, a dessertspoonful of salt, and an ounce of whole white pepper; bring these quickly to a boil, take off the scum, throw in the eschalots, simmer them for two minutes only, turn them into a clean stone jar, and when they are quite cold, tie a skin, or two folds of thick paper over it.

French Pickle.—*Take:*—Green tomatoes, 1 peck; green peppers, 6; onions, 6; salt, ½ pt; brown sugar, 1 pt; horse radish (grated), ½ pt; ground cloves, ground allspice, ground cinnamon, 1 tablespoonful each; mustard seed, celery seed, 2 or 3 tablespoonfuls each; pepper corns, ½ gill.

Slice the tomatoes, onions and peppers (having taken the seeds from the latter) sprinkle the salt over them and let them stand all night. Then pour off the water and add the other ingredients; mix well; put it in a large porcelain lined kettle, cover with good vinegar and boil slowly until well cooked; this requires several hours. A few red peppers may be added, if liked.

Gherkins.—Pickle these exactly as directed for cucumbers. The smaller gherkins make the choicest pickles.

Higdom.—Peel and take the seeds from large green cucumbers; chop them and to two quarts add one of chopped onion; mix them, adding 3 tablespoonfuls of salt; after two hours hang them in a thin cloth, to drain for twelve hours; put them in a preserving kettle, season with cayenne and black pepper, cover with vinegar, heat slowly and boil ten minutes.

Kalamazoo Pickles.—*Take:*—small cucumbers (2 or 3 inches long) ½ bush.; brown sugar, 1 qt; white mustard seed, ½ pt; broken cinnamon, 1 oz; alum, 2 oz; celery seed, 1 oz; vinegar, 7 qts.

Wipe the withered flowers from the end of the cucumbers; cover with a brine made of two gallons of water and a pound of salt; let them stand twenty-four hours; drain them; boil the vinegar, alum and spices; put the cucumbers in glass cans, rinsed in hot water, pour in the boiling vinegar and spices, and close at once.

Mangoes.—Take the latest growth of mangoes of not more than a third or half their full size. Keep them in brine several weeks; then soak them for two days in cold water changing the water frequently; boil them in vinegar with a small piece of alum, three quarters of an hour; stand them in the vinegar (well covered) for a week. Remove the seeds and fill with this mixture: one pound of ginger soaked in brine for a day or two, or until soft enough to slice, whole black pepper, cloves, mace, allspice and tumeric, one ounce each; half a pound of garlic, soaked for a day or two in brine, and then dried; grated horse radish, black mustard seed and white mustard seed, one pint each. Bruise the spices and mix them with a teacupful of olive oil. For each mango add a teaspoonful of brown sugar. This is sufficient for four dozen large mangoes. Having chopped six or eight imperfect ones to mix with the stuffing, tie up and pour over them the best cider vinegar. Set in a light dry place to be cured. After a month add three pounds of brown sugar to the vinegar; scald and pour it over them hot; keep them dry and light.

Mixed.—Take some very tender string beans, some very small onions, a cauliflower broken into bits, a red pepper cut fine, a few long green peppers, and some small tomatoes; scald them in salt and water and let them stand about twenty-four hours. Drain them well, put them into a jar or pan, and turn boiling spiced vinegar over them; let them stand till cool, then put them into glass jars and stop them tight. The proportions of the different ingredients in this pickle can be varied to suit the taste.

Monrœl.—Keep very small cucumbers in brine for twenty-four hours; drain them and put them in a jar; cover with boiling water allowing an ounce of alum to five quarts. Leave them on a warm hearth several hours; drain and cover with boiling vinegar seasoned with cloves, whole peppers, mace and a little sugar.

Mushrooms (Brown).—Take a quart of large mushroom buttons, and wash them in vinegar with a piece of flannel; take three anchovies and chop them small, a few blades of mace, a teaspoonful of salt, a little pepper and ginger, and three cloves of shalots. Put them into a saucepan with as much vinegar as will half cover them; then set them on the fire and let them stew till they shrink pretty well. When cold put them into bottles, pour the vinegar over them, cork and tie them up. This pickle will make a fine addition to brown sauces, and is much liked.

Mushrooms (White).—Put the mushrooms in equal quantities of cold milk and water, and rub them with a piece of flannel; have ready hot milk and water, and boil them in it a few minutes; take them out carefully and put them into a jar with a little salt, and cover them closely with a cloth; let them stand till next day, then boil up the vinegar and pour over them.

Onions.—Choose fine white ones, not too large, peel them, and let them stand in strong salt and water three days, changing the brine on the second day. Heat more brine to a boil, throw in the onions, and boil three minutes; then drain off the brine, and throw the onions into cold water, leaving them there several hours. Pack in jars, season with cloves, mace, and whole pepper, and fill up with scalding vinegar in which sugar has been dissolved in the proportion of a teacupful to every gallon. Cork while hot. They can be used in a month, but improve with keeping.

Onions (Sliced) and Cucumbers.—Slice but do not peel large cucumbers, and peel and cut in thick slices large onions; soak them in brine for a day: then drain them, put them into jars, and pour on boiling vinegar, with ginger, allspice, and whole black pepper, three successive days. This is a cheap and good pickle.

Peaches.—Take, at their full growth just before they begin to ripen, six large or eight moderate sized peaches; wipe the down from them and put them into brine that will float an egg. In three days take them out, and drain on a reversed sieve for several hours. Boil in a quart of vinegar for ten minutes, two ounces of whole white pepper, two of ginger slightly bruised, a teaspoonful of salt, two blades of mace, half a pound of mustard-seed and half a teaspoonful of cayenne tied in a bit of muslin. Lay the peaches into a jar, and pour the boiling pickle on them. In two months they will be fit for use.

Peaches (Sweet). — Put four pounds of pared peaches into a kettle with two pounds of sugar, and heat slowly to a boil; add half a pint of good vinegar strongly spiced with cloves, mace, and cinnamon, and boil for five minutes; take out the fruit with a perforated skimmer and spread upon dishes to cool. Pack the fruit in glass jars, boil the syrup thick and pour it on scalding hot. Look into the jars every few days for a month or so and if there are any signs of fermentation, set the jars in a kettle of water and heat until the contents are scalding hot.

Pears, plums, and other fruits may be pickled in this way.

Piccalili. (*See* PICALILI.)

Sweet Pickles.—Almost any kind of fruit may be used in making sweet pickles. To two pounds of fruit allow a pint of vinegar, and a pound of sugar; put on the vinegar and sugar and let them boil fifteen minutes, skimming carefully; then put in the fruit and let it boil till about half cooked; put it in jars, and cork tight. For peaches a little cinnamon and mace may be boiled with the vinegar; for plums, or dark fruit, allspice or cloves.

Tomatoes (Green). — Slice without peeling, two gallons of green tomatoes, and also slice a dozen medium-sized onions; add half a gallon of vinegar, a pound of sugar, two tablespoonfuls each of salt, black pepper, and ground mustard, and one tablespoonful each of cloves and allspice. Put on the fire and stew until the tomatoes and onions are quite tender,

stirring often from the bottom; when cold put into glass jars. This is one of the best pickles to serve with meat and fish.

Tomatoes (Ripe).—To two gallons of ripe tomatoes, sliced without peeling, add a pint of vinegar, and two pounds of sugar; season with cinnamon, mace, and nutmeg; put on the fire and simmer slowly for an hour. Put up in glass jars.

Walnuts.—I. Gather the walnuts while soft enough to be pierced by a needle. Prick each with a large needle (hold the walnuts in a cloth during this process to avoid staining the hands); cover them with strong salt and water; let them stand two or three days, changing the water every day. Then pour over them a strong brine made of salt dissolved in boiling water (let it get cold before using), stand three days, and then repeat the process. Drain and expose them to the sun until they are black. Put them into a jar, and pour over them as much good vinegar as will cover them. To each hundred walnuts allow six spoonfuls of mustard seed, one ounce of whole black pepper, two or three shalots, two ounces of whole ginger crushed, a few cloves, and a blade or two of mace. Tie them down closely for six months. At the end of that time drain off the vinegar, and use as ketchup. Fill up the jars with fresh vinegar, and add, if necessary, a few more peppercorns. In six months more they will be ready for use.

II. Soak in salt water and brine as before; but instead of laying them in the sun, put them in cold water for half a day, and then pack them in small jars. Measure out enough vinegar to cover them well, and for each gallon allow a teacupful of sugar, three dozen each of whole cloves and allspice, a dozen and a half of allspice, and a dozen blades of mace; boil five minutes, and pour over the walnuts scalding hot. In three days draw off the vinegar, heat it to boiling, and again pour it over the walnuts; and at the end of three days more repeat the process. Walnuts pickled thus will be fit to eat in a month.

Butternuts can be pickled by either of the methods given above.

PICKLING MEAT.—This consists in keeping meat immersed in a strong brine, to which other ingredients are sometimes added. This mode of preserving does not render the meat so salt as dry rubbing, nor is it so well calculated for keeping it for a great length of time, being chiefly limited to small pieces; it is thought, however, to be less injurious to the nutritious qualities of the meat. Full directions for pickling beef, tongues, pork, etc., etc., are given under the respective articles.

PICTURES (Cleaning). Castile soap and water can be used on oil paintings without danger, care being taken of course not to wet the back, or let water through cracks. There are few other things that can except by experts. For the ordinary dusting of pictures a silk handkerchief should be used.

Framing.—Heavy gilt frames are appropriate to oil paintings. On chromos, they suggest a dishonest (and consequently untasteful) attempt to make the chromo appear what it is not—an oil painting. An engraving would be made to appear cold by a bright or heavy gilt frame, though sometimes a plain unburnished one looks well. Of course a margin of white paper is needed between the printed surface and the frame, so as not to make the contrast of brilliancy too violent. Moreover, if the frame be dark, the margin prevents the monotonous continuation of dark color, and if it be of colored wood, the margin prevents a harsh contrast.

Gay colored wood frames brighten up a room which sometimes needs it, and if of appropriate colors, do not jar on the taste. One would hardly select pale blue to frame a battle scene, however, or blood-red for a Madonna.

Chromos should honestly express what they are—color printed on paper, and should not be made to represent paint and canvas by smearing the color unreasonably thick and embossing the paper. Such chromos deceive no one but the owner. Chromos had best have a margin, as association of ideas requires it in paper. Light frames of dead gilt, or uncolored wooden ones should be the only styles used on them.

Passe-partouts are good for all small engravings and honest chromos.

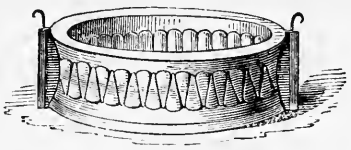
In framing engravings or chromos, see that no knots are in the boards at the back, as resinous exudations are apt to strike from them through the paper. If knots are found, glue over them bits of sheet rubber.

Hanging.—Use copper wire. Moths eat out the inside of cord. Nails damage walls, and fresh ones are needed for all changes. Far the best way of suspending pictures is from hooks sliding on rods of painted gas-pipe or burnished brass, fastened into the wall near the ceiling. A wooden moulding grooved in its inner upper edge so that hooks shaped like the letter S can curve over its top, answers admirably for light pictures. Where one is rid of nails, it is certainly best to hang the picture from wire on each side depending from separate hooks. The lines of the wires correspond better with the general lines of the walls, and give a feeling of greater strength. It is but little more trouble to do this than to use the single wire, provided two nails are not needed.

Protecting from insects.—Water in which onions have been boiled, rubbed lightly over the frames, will keep insects away from them.

PIES.—Whether pies are healthy or the contrary depends chiefly upon the character of the crust, and in order to make good crust it is absolutely necessary to use only the best materials. The flour must be thoroughly dry and white (*See* BREAD); and the butter, in particular, should be the best that can be procured. The using of inferior butter—"cooking butter" as it is called—is the most common mistake in the making of pies; and yet it

requires but little experience to show that bad butter is sure to reveal all its worst qualities in pie-crust. Butter intended for pastry should be washed carefully in several clean, cold waters, and kneaded while under water in order to extract the salt; then wipe it dry and lay it in a cool place till the time comes for working it in. The board on which the butter



Raised Pie-mould.

is rolled should be hard and smooth, and it should not be used for any other purpose. It is harder to make good pastry in warm weather than in cold, on account of the tendency of butter to oil, and thus render the crust heavy and solid.

Pie-Crust. **I.**—*Take:*–Sifted flour, 1 lb; butter, ¾ lb; cream tartar, two teaspoonfuls; soda one teaspoonful; ice-water.

The butter should be stiff and firm; cut it into the smallest possible bits, and add half of it to the flour, with which the soda and cream tartar should have been previously well-mixed; work with ice-water into a stiff dough; then roll it out thin, spot it over with one-third of the remaining butter, fold it up closely into a long roll, flatten and roll out again; repeat this operation three times, until all the butter has been worked in, and it will then be ready for use. In forming the pie, roll out the crust thin, butter the pie-plates, lay the paste lightly over them and press it down so as to take the shape of the plates; then cut it off evenly around the edges, saving the scraps to roll out into another sheet. Now fill the plates with fruit, or whatever is to form the inside of the pie, lay the paste over this, trim as before, and press the edges of the upper and lower crusts together with a spoon, key, or jagging-iron, so as to prevent the escape of the juice. Pies should be baked to a light-brown, in a mode-

Paste pincers.

rately hot oven, and great care should be taken to have the heat as high at the bottom of the oven as at the top—otherwise the bottom crust will be raw and doughy.

II.—*Take:*–Flour, 1 lb; butter, 10 oz; lard, 6 oz; salt.

Mix the lard (which should be pure and firm) with the flour, and work them into a smooth paste with cold water; press the buttermilk from the butter, and form the latter into a ball by twisting it in a clean cloth; roll out the paste, put the ball of butter in the middle, close it like an apple dumpling, and roll it very lightly, until it is less than an inch thick; then fold the ends into the middle, dust a little flour over the board and the roller, and roll the paste thin a second time, then set it aside for a few minutes in a very cool place; give it two more *turns* (or folds), rolling it out each time, and set it away again for a few minutes; roll it out twice more, and it ought to be fit for use. The sooner this crust is sent to the oven after it is made, the lighter it will be; if allowed to remain long before it is baked, it will be tough and heavy.

Cream Crust.—*Take:*–Flour, 1 lb; salt, one small saltspoonful (more for meat pies); rich cream, ¼ to ½ pint; butter, 4 oz (for richest crust, 6 oz).

Stir the salt thoroughly into the flour, and mix the cream in till a smooth paste is formed; roll it out thin and add the butter minced fine; re-roll it three or four times. Handle this crust as lightly as possible in making it, and send it to the oven as soon as it is ready. It may be used for pies, fruit tarts, puffs, and other varieties of small pastry, or for good meat pies. A good crust for ordinary family use may be made by omitting the butter, but the butter improves it greatly; six ounces of butter to the pound of flour will give a very rich crust.

Puff-paste.—*Take:*–Flour 2 lbs; butter 1 lb. 10 oz; a little salt.

Break eight ounces of the butter lightly into the flour (sifted); add a pinch of salt, and enough cold water to make the paste; work it as quickly and as lightly as possible, until it is smooth and pliable, then level it with the paste roller until it is three-quarters of an inch thick, and place regularly upon it six ounces of butter in small bits; fold the paste like a bolster pudding, roll it out again, lay on it six ounces more of butter, repeat the rolling, dusting each time a little flour over the board and paste, add again six ounces of butter, and roll the paste out thin three or four times, folding the ends into the middle. If very rich paste be required, equal portions of flour and butter must be used; and the latter may be divided into two, instead of three parts, when it is to be rolled in.

French Puff-paste.—*Take:*–Flour and butter, equal weights; to each pound of these, the yolks of two eggs, and a small saltspoonful of salt.

This, when made by a good French cook, is the perfection of rich light paste, and will rise in the oven from one to six inches in height; but some practice is, without doubt, necessary to accomplish this. In summer it is a great advantage to have ice at hand, and to harden the butter over it before it is used; the paste also between the intervals of rolling is improved by being laid on an oven-leaf over a vessel containing ice. Take an equal weight of good butter free from the coarse salt which is found

in some, and which is disadvantageous for this paste, and of fine, dry, sifted flour; to each pound of these allow the yolks of two eggs, and a small teaspoonful of salt. Break a few small bits of the butter very lightly into the flour, put the salt into the centre, and pour on it sufficient water to dissolve it (we do not understand why the doing this should be better than mixing it with the flour, as in other pastes, but such is the method always pursued for it); add a little more water to the eggs, moisten the flour gradually, and make it into a *very* smooth paste, rather lithe in summer, and never *exceedingly* stiff, though the opposite fault, in the extreme, would render the crust unmanageable. Press, in a soft thin cloth, all the moisture from the remainder of the butter, and form it into a ball; but in doing this be careful not to soften it too much. Should it be in an unfit state for pastry, from the heat of the weather, put it into a basin, and set the basin into a pan of water mixed with plenty of salt and saltpetre, and let it remain in a cool place for an hour, if possible, before it is used. When it is ready (and the paste should never be begun until it is so), roll the crust out square, and large enough to enclose the butter, flatten this a little upon it in the centre, and then fold the crust well over it, and roll it out thin as lightly as possible, after dredging the board and the paste roller with a little flour: this is called giving it *one turn*. Then fold it in three, give it another turn, and set it aside where it will be very cool, for a few minutes; give it two more turns in the same way, rolling it each time very lightly but of equal thickness, and to the full length that it will reach, taking always especial care that the butter shall not break through the paste. Let it again be set aside to become cold; and after it has been twice more rolled and folded in three, give it a half-turn, by folding it once only, and it will be ready for use.

Short-crust for Sweet Pastry.—*Take:*—Flour, 1 lb; butter, ½ lb; sugar (sifted), 2 oz; milk, and salt.

Break the butter very small and add it to the flour; mix well with these a pinch of salt and the sugar, and add enough milk to make them up into a smooth and somewhat firm paste. Bake this slowly to a very light brown. It will be found an admirable crust if well made and lightly handled, and will answer for many dishes much better than puff-paste; it will rise in the oven too, and be extremely light. Ten ounces of butter will make it very rich, but eight is enough.

Economical Short-crust.—*Take:*—Flour, 1 lb; mixed dripping and lard (or all dripping alone will do), ½ lb; cold water.

Mix the dripping and lard into the dry flour well, either with the thumb and fingers, or with a fork or spoon; add just enough cold water to wet it and make a paste; roll it out three times. After covering the dish, wet the crust with milk, or the white of an egg, and sift crystallized or "crushed lump" sugar over it. This recipe, without the sugar, and with a little salt mixed with the flour, answers very well for meat-pies.

Suet-crust.—*Take:*–Flour, 2 lb; beef or veal kidney-suet, 12 to 16 oz; salt (for fruit pies), ½ teaspoonful; (for meat pies, one teaspoonful.)

In many families this is preferred, both for pies and tarts, to crust made with butter, as being much more wholesome; but it should never be served unless especially ordered, as to some persons it is peculiarly distasteful. Chop the suet extremely small, and add from six to eight ounces of it to a pound of flour, with a few grains of salt; mix these with cold water into a firm paste, and work it very smooth. Some cooks beat it with a paste-roller, until the suet is perfectly blended with flour; but the crust is lighter without this. In very sultry weather the suet, not being firm enough to chop, may be sliced as thin as possible, and well beaten into the paste after it is worked up.

Apple Pie.—I. Select ripe and rather tart winter apples; pare and core them, and slice rather small; line the pie-plate with crust, put in the fruit, and cover with a top crust; bake in a moderate oven till the crust is light brown and the fruit tender. Then take from the oven, remove the upper crust without breaking, and add sugar and nutmeg, cinnamon, or rose-water to taste. Some prefer the seasoning added before baking. A little orange peel chipped fine and added before baking, gives a pleasant flavor.

II. Pare, core, and quarter the apples; put into a preserving-kettle with four tablespoonfuls of powdered sugar to a pie, and add water enough to make a thin syrup; add a few blades of mace, and boil the apple (a few pieces at a time, so as to avoid breaking them) in the syrup till tender; as they get done, take them carefully from the kettle and lay them in dishes. When enough apples for the number of pies to be made are ready, add to the syrup cinnamon and rose-water, or any other spice, enough to flavor it well, and divide it among the pies. Put the contents of each pie into a pie-plate without a bottom crust, line the rim with paste, and cover with a top crust; bake to a light brown in a moderate oven. This is an excellent recipe.

Beefsteak Pie.—Line a large pie-dish with a good crust; pour into it a teacupful of highly-seasoned stock or gravy; cut the steak into pieces of convenient size for serving to each person, and dust them on both sides with flour, pepper, and salt; arrange them in the dish, intermingling with them a small proportion of fat. A few pieces of veal, with two or three hard-boiled eggs in quarters, make an agreeable variety in the contents of the pie. Pour over these half-a-teacupful more of well-seasoned stock or gravy, cover with a good stout crust, and bake an hour or more in a moderate oven. Beefsteak pie is best hot, but is an enjoyable dish cold for travelling and picnics. A pie composed of beefsteak only is almost

too solid a dish for ordinary appetites ; but any pie composed of meat, fowl, or game, is the better for having a layer of beef steak at the bottom, on which the other ingredients are afterwards placed. The bottom of the pie-dish being in contact with the floor of the oven, the steak intercepts the heat which might otherwise overcook the tenderer meats ; it likewise enriches the gravy. (*See* also under BEEF.)

Blackberry Pie.—Line a deep plate with paste ; fill it about half full of blackberries, previously picked and washed ; add half a teacupful of sugar, a tablespoonful of butter, and a little cinnamon ; fill up the plate with berries, add a little more sugar, cover with a good crust, and bake an hour in a moderate oven. A few currants improve this pie.

Carrot Pie.—Scrape the carrots, boil very soft, and mash them through a sieve. To a pint of the strained pulp and six eggs well beaten, add three pints of boiling milk, two tablespoonfuls of melted butter, the juice of half a lemon, the grated rind of a whole one, and sugar to the taste (some of it mixed with the lemon-juice), and bake in deep pie-plates without an upper crust.

Cherry Pie.—Make like blackberry pie, omitting butter, and regulating the quantity of sugar by the sweetness of the cherries. Best cold, with white sugar sifted over the top.

Cocoanut Pie.—I. Cut off the brown part of the cocoanut—grate the white part, mix it with milk, set it on the fire, and let it boil slowly eight or ten minutes. To a pound of the grated cocoanut allow a quart of milk, eight eggs, four tablespoonfuls of sifted white sugar, a glass of wine, a small cracker, pounded fine, two tablespoonfuls of melted butter, and half a nutmeg. The eggs and sugar should be beaten together to a froth, then the wine stirred in. Put them into the milk and cocoanut, which should be first allowed to get quite cool ; add the cracker and nutmeg ; turn the whole into deep pie-plates, with a lining and rim of puff paste. Bake them as soon as turned into the plates.

II. Cut away the brown part of the cocoanut as before, and grate the white part ; beat 12 ounces of powdered sugar and six ounces of butter to a light cream, adding a wineglassful of white wine, two tablespoonfuls of rose-water, and a teaspoonful of nutmeg ; then stir in half a pound of the grated cocoanut, and finally the whites of five eggs, whipped to a stiff froth. Line the plates with paste, fill with the above mixture, and bake without a top crust. Eat cold, with sugar sifted over the top.

Cranberry Pie.—Make exactly like ripe currant pies, but stew the cranberries till well done before straining them through the sieve. The pies may be made without any top crust, or narrow strips of paste may be interlaced across the top.

Currant (Green) Pie.—Gather the currants when they are just beginning to turn red, pick off the stems, and wash them in cold water. Line a pie-plate with good paste, fill it about half full of the currants, and add half a teacupful of sugar, a tablespoonful of butter, and a little ground cinnamon ; fill up the plate with currants, add nearly half a cupful more of sugar, and cover with a crust ; bake half an hour in a moderate oven. These pies may be eaten either hot or cold. If the foregoing recipe makes them too sweet, use less sugar.

Currant (Ripe) Pie.—Stem and wash the currants ; stew them ten minutes, and strain them through a sieve ; add plenty of sugar while they are hot, and set them away to cool. Line small pie-plates with paste, fill them with the currrants, and bake in a moderate oven until the crust is done. No top crust is put over these pies.

Custard Pie.—I. (Apple)—Stew the apples till quite soft, adding sugar enough to make them very sweet ; when done, set them away to cool. Beat up six eggs, the whites and yolks separately, and mix the yolks with three teacupfuls of the stewed apple ; stir in a quart of milk, and then the whites of the eggs ; line pie-plates with a light crust, fill with the mixture, and bake without a top crust.

II. (Corn-starch).—Put three pints of milk on the fire, and when it comes to a boil, stir in two tablespoonfuls of corn-starch wet in a little cold milk, and boil one minute ; remove from the fire, and when nearly cold stir in two tablespoonfuls of white sugar, the yolks of six eggs, and the whites of two, and flavor with two teaspoonfuls of essence of bitter almonds ; line pie-plates with paste, fill with the custard, and set in a moderate oven ; whip up the remaining whites of eggs with two tablespoonfuls of white sugar and a teaspoonful of vanilla, and as soon as the custard has "set," draw the pies to the edge of the oven and spread the mixture *quickly* over them.

Arrowroot or rice-flour may be substituted for the corn-starch in this recipe.

III. (Peach.)—Pare some nice ripe peaches and remove the stones ; stew them in a little water till thoroughly done, then mash them smooth and flavor with nutmeg ; set aside to cool. Line pie-plates with paste, fill with the peach, and bake in a moderate oven until the crust is just done. Make a méringue by whipping to a stiff froth the whites of three eggs for each pie ; sweeten with a tablespoonful of powdered sugar for each egg, flavor with vanilla or rose-water, and beat to a very stiff froth ; then spread it nearly an inch thick over the pies, and set them back into the oven until the méringue is well set. To be eaten cold.

Gooseberry Pie.—Pick off all the stems and little blossoms from the berries. Line some pie-plates with paste, and fill half full of berries ; add plenty of sugar, a tablespoonful of butter, and a little ground cinnamon ; then fill the plate with the berries, add more sugar, and cover with a light crust ; bake until the crust is done, then open the oven door, and let the pies stand ten or fifteen minutes before removing.

Grape Pie.—Grapes make good pies only

when they are young and tender. If not very small, stew and strain them to get out the seeds; sweeten them to the taste when stewed —they do not require any spice. If made into a pie without stewing, put to each layer of grapes a thick layer of sugar, and a tablespoonful of water.

Huckleberry Pie.—Make exactly like a Blackberry pie.

Lemon, or Mock-Apple Pie.—I. For one large plate, pour half a pint of cold water on two square soda crackers broken in small bits, add a small piece of salt, the grated yellow rind and the juice of one lemon, also a pint of coffee-sugar and one well-beaten egg; mix and bake with an upper as well as a lower crust.

II. Take two good-sized, large lemons; grate the yellow rind, squeeze the juice and chop the white skin and pulp as fine as possible; mix two and a half even tablespoonfuls of cornstarch with a little cold water and stir it in one gill of boiling water; add this to the lemon with half a pint of coffee-sugar; mix well, pour on paste-lined plates, cover with pastry, and bake half an hour or more. If less flavor of the rind is liked, grate but one lemon, throwing away the thin yellow rind of the other. The various lemon puddings called *pies* are not so, strictly speaking, as they have no upper crust, neither should a pie be called a pudding or a tart, both of which are uncovered.

Lemon Cream Pie.—Place on fire, in a thick stew-pan, 1 qt milk, 2 blades mace, 1 inch cinnamon, 3 cloves, rind of 2 lemons pared thin, and a pinch of salt. When it boils, strain; return to fire with 4 tablespoonfuls corn starch dissolved in a little cold milk, and 6 oz sugar; boil, and remove; add 5 yolks of eggs, juice of 3 lemons, 4 oz butter. Line pie-plate with paste, work up a high rim. Pour in the cream; bake without top crust.

Marlborough Pie.—Pare and grate some nice sweet apples. Beat a couple of eggs to a froth, and stir in enough brown sugar to make the pie sweet; add a pint of milk and a pint of the grated apple pulp, the grated peel of a lemon, and half a wineglassful of brandy; stir all well together. Bake in deep plates, without any upper crust. A little stewed pumpkin mixed with the apples is considered an improvement to these pies.

Mince Pies.—Directions for making mince-meat are given under MINCE-MEAT and MOCK MINCE-MEAT. Mince pies should have a very light crust both top and bottom, and be well baked. Eat either hot or cold, with sugar sifted over the top.

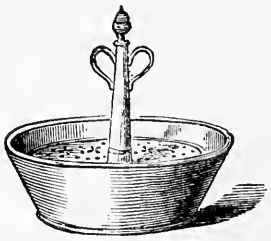
Orange Pie.—Beat a level teacupful of white sugar and two tablespoonfuls of butter to a light cream; add the juice and half the grated rind of one orange, and the juice and grated peel of half a lemon; beat together well, and add the yolks of three eggs beaten to a froth; season to taste with nutmeg. Line a pie-plate with light paste, fill it with the above mixture, and bake without a top-crust; beat up the whites of the eggs with two tablespoonfuls of powdered sugar, and when the pies are done, spread over them and return to the oven for three minutes or so.

Peach Pie.—I. Peel and stone the peaches, and cut them into thin slices; line a deep pie-plate with a thin paste, fill up with the fruit and sweeten liberally, though very ripe peaches will not require much sugar; allow three peach-kernels, chopped fine, to each pie; cover with a puff paste, and bake three-quarters of an hour in a moderate oven. Instead of the top crust, cross-bars of the paste may be laid across the top.

II. Peel some peaches, cut them in halves, and put them into a saucepan, with a very little water and sugar; simmer until the peaches are tender; lift the peaches out and set them aside to cool; add a little more sugar to the juice, and let it simmer till it thickens. Line a pie-plate with paste, lay in the peaches carefully, and turn the juice over them; cover with a rich puff paste, or omit the top crust entirely; bake twenty minutes. (*See Custard Pie, (Peach.)*

Plum Pie.—Put the plums in a little sugar and water, and simmer until they are tender; then take them out and put them in a dish; add more sugar to the juice, and boil it till it begins to thicken; then turn it over the plums, and set aside to cool. When cold, line tin pie-plates with a rich paste, fill them with the plums and juice, cover with a puff paste, and bake half an hour.

Potato Pasty.—A tin mould of the construction shown in the cuts, with a perforated moveable top, and a small valve to allow the escape of the steam, must be had for this pasty, which is a good family dish, and which may be varied in numberless ways. Arrange at the bottom of the mould from two to three pounds of mutton cutlets, freed, according to the taste, from all or from the greater portion of the fat, then washed, lightly dredged on both sides with flour, and seasoned with salt and pepper, or cayenne. Pour to them sufficient broth or water to make the gravy, and add to it at pleasure a tablespoonful of mushroom catsup or of Harvey's sauce. Have ready boiled, and *very* smoothly mashed, with about one ounce of butter, and a spoonful or two of milk or cream



Pasty Mould.

to each pound, as many good potatoes as will form a crust to the pasty of quite three inches

thick; put the cover on the mould and arrange these equally upon it, leaving them a little rough on the surface. Bake the pasty in a moderate oven from three-quarters of an hour to an hour and a quarter, according to its size and its contents. Pin a folded napkin neatly round the mould, before it is served, and have ready a hot dish to receive the cover, which must not be lifted off until after the pasty is on the table.

Pasty Mould.

Potato (Irish) Pie.—Boil mealy Irish potatoes until they are perfectly done, then peel them, and mash them through a colander. To one pound of the potatoes, put a quart of milk, three tablespoonfuls of melted butter, four beaten eggs, and a wineglassful of wine: sweeten with sugar to taste, and season with nutmeg and mace. Bake without any top crust, and let them cool before eating.

Potato (Sweet) Pie.—Boil some mealy sweet potatoes till about half done, and when *quite cold* grate them. Beat half a teacupful of butter, and not quite a teacupful of sugar, to a light cream; add the beaten yolks of four eggs, the juice and grated rind of a lemon, a tablespoonful of cinnamon, and a teaspoonful of nutmeg; stir together, and add by degrees a pound of the grated potato, beating them in well; then add a wineglassful of brandy, and the whites of the eggs whipped to a light froth. Line some deep pie-plates with a rich paste, fill with the mixture, and bake without any top-crust. Eat cold.

Pumpkin Pie.—I. Cut the pumpkin in half, remove the seeds, and rinse out the inside; cut into small strips and stew them, over a moderate fire, in just enough water to prevent their burning to the bottom of the pot. When it has stewed soft, turn off the water, and let the pumpkin steam over a slow fire for fifteen or twenty minutes, taking care that it does not burn; remove it from the fire, and when cool press it through a sieve. If you wish to have the pies very rich, put to a quart of the stewed pumpkin two quarts of milk, and twelve eggs. If you like them plain, put to a quart of the pumpkin one quart of milk, and three eggs. The thicker the pie is of the pumpkin, the less will be the number of eggs required; one egg, with a tablespoonful of flour, will answer for a quart of the pumpkin, if very little milk is used. Sweeten the pumpkin with sugar, and very little molasses—the sugar and eggs should be beaten together. Ginger, the grated rind of a lemon, or nutmeg, is good spice for the pies. Pumpkin pies require a very hot oven. The rim of the pies is apt to get burnt before the inside is baked sufficiently; on this account, it is a good plan to heat the pumpkin scalding hot when prepared for pies, before turning it into the pie-plates. The pies should be baked as soon as the plates are filled, or the under crust to the pies will be clammy. The more the number of eggs in the pies, the less time will be required to bake them.

If you have pumpkins that have begun to decay, or that are frozen, they can be kept several months, in cold weather, by cutting the good part up, stewing it till soft, then stirring it, and adding sugar and molasses, to make it very sweet. Make it strong of ginger, then scald the seasoning in well. Keep it in a stone jar in a cool place; whenever you wish to use any of it for pies, take out the quantity you wish, and put milk and eggs to it.

II. (Rich). To one quart of strained pumpkin add two quarts of milk and a pint of cream; one teaspoonful of salt, and four teaspoonfuls of ginger; two teaspoonfuls each of nutmeg, mace, and pounded cinnamon, and ten eggs, well beaten. Mix together well, and sweeten to taste. Line a pie-plate with good paste, fill with the pumpkin, and bake (without a top crust) till the pie is solid in the centre.

Squashes may be used instead of pumpkins in making these pies. (*See* SQUASH PUDDING.)

Raspberry Pie.—Like cherry pie.

Rhubarb Pie.—I. Peel the stalks of rhubarb, and cut them in very small pieces; line a deep pie-plate with paste, fill it half full of the rhubarb, and put in plenty of sugar; season with a little pounded cinnamon; then fill up the plate with rhubarb, add more sugar, and a teaspoonful of butter; cover the whole with a good crust, and bake till the crust is done; then open the oven door and let the pies stand ten or fifteen minutes.

II. Cut the stalks of the rhubarb into small pieces, and stew them with some lemon-peel till tender; strain them, sweeten to taste, and add eggs, more or less, according as you want the pies rich or otherwise. Bake without an upper crust.

Rice Pie.—To a quart of boiling water put a small teacupful of rice; boil it till very soft, then take it from the fire, and add a quart of cold milk; add also a teaspoonful of salt, a grated nutmeg, and five eggs beaten to a froth; sweeten to taste and press the whole through a sieve. Bake in deep pie-plates with an under-crust and rim of paste but no top-crust. A few raisins improve this pie.

Strawberry Pie.—Pick the berries carefully. Line a pie-plate with good paste, put in a layer of the strawberries, and sprinkle plentifully with sugar; then another layer and more sugar, till the plate is full. Fill very full as strawberries shrink greatly in cooking. Cover with a light crust, and bake in a moderate oven.

Tomato Pie.—Take green tomatoes turn boiling water on them, and let them remain in it a few minutes; then strip off the skin, cut the tomatoes in slices, and lay them in deep pie-plates, lined with paste; sprinkle sugar over each layer, and a little ground ginger; cover with a thick crust, and bake slowly for about an hour. Grated lemon-peel and the juice of a lemon will improve these pies.

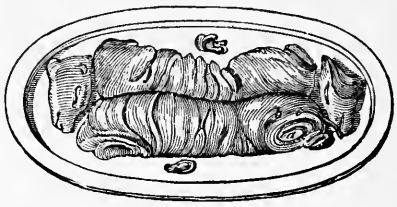
PIG.—The young pig is not changed in name, like the full-grown hog, by the fact of slaughtering; living or dead it is called a pig, a roaster, or more commonly a "roasting-pig." When desired for a choice dish, it should not be less than three nor more than six weeks old. The skin of the roasting-pig should be white (this color being preferred to all others) plump, hard, and well-cleaned. The flanks, where it is opened, should be thick and fat, and it ought to weigh from eight to fourteen pounds. The best season for it is during the fall and winter months.

Baked Pig.—Prepare the pig exactly as for roasting; truss and place it in the dish in which it is to be sent to the oven, and anoint it thickly in every part with whites of eggs which have been slightly beaten; it will require no basting, nor further attention but turning, and will be well crisped by this process. It will take from one to two hours to bake.

Roast Pig.—After the pig has been scalded and prepared for the spit, wipe it as dry as possible, and put into the body about half a pint of fine bread-crumbs, mixed with three heaped teaspoonfuls of sage, minced very small, three ounces of good butter, a large saltspoonful of salt, and two-thirds as much of pepper or some cayenne. Sew it up with soft, but strong cotton; truss it with the fore legs skewered back, and the hind ones forward; lay it to a strong clear fire, but keep it at a moderate distance, as it would quickly blister or scorch if placed too near. So soon as it has become warm, rub it with a bit of butter tied in a fold of muslin or thin cloth, and repeat this process constantly while it is roasting. When the gravy begins to drop from it, put basins or small deep tureens under, to catch it in. As soon as the pig is of a fine light amber brown and the steam draws strongly towards the fire, wipe it quite dry with a clean cloth, and rub a bit of cold butter over it. When it is half done, a pig-iron, or in lieu of this, a large flat-iron should be hung in the centre of the grate, or the middle of the pig will be done long before the ends. When it is ready for table lay it into a very hot dish, and before the spit is withdrawn, take off and open the head and split the body in two, chop together quickly the stuffing and the brains, put them into half a pint of good veal gravy ready thickened, add a glass of Madeira or of sherry, and the gravy which has dropped from the pig; pour a small portion of this under the roast and serve the remainder as hot as possible in a tureen; a little pounded mace and cayenne, with a squeeze of lemon-juice, may be added, should the flavor require heightening. Fine bread sauce and plain gravy should likewise be served with it. Some persons still prefer the old-fashioned currant sauce to any other; and many have the brains and stuffing stirred into rich melted butter, instead of gravy; but the receipt which we have given has usually been so much approved, that we can recommend it with some confidence, as it stands. Modern taste would perhaps be rather in favor of rich brown gravy and thick tomato sauce.

It will take from an hour and a quarter to an hour and three-quarters to roast a pig of ordinary size.

In dishing the pig lay the body flat in the middle, and the head and ears at the ends and



Roast Sucking Pig

sides. When very pure oil can be obtained it is preferable to butter for the basting: it should be laid on with a bunch of feathers.

If the pig is small it is more ornamental to dish and send it to the table whole, garnished with the green leaves of whatever vegetables are in season.

In carving the pig, cut the head off first; then split down the back, take off hams and shouiders, and separate the ribs. Serve some of the dressing to each person.

PIGEONS.—The old pigeons are rather dry eating as compared to some other birds; but the flesh is well flavored, and if they are cooped up and fed well a few days before killing it will be more delicate and tender. The young pigeons, or *squabs*, are rightly esteemed a great delicacy, and their nutritiousness makes them an excellent food for the sick. They are found in the markets all the year round.

Wild Pigeons, both alive and dead, are to be had in the markets throughout the winter months, and are generally very plentiful and cheap in September and October, when they are at their best. The wild squabs, when fat and fresh, are a very delicate and savory food; the cooped bird is also good, though the flesh is rather dry; but an old or poor wild-pigeon is very indifferent eating, even if well cooked. The tame and the wild birds are dressed and served alike.

Baked Pigeons.—Clean, and prepare as for roasting; lay them in a bake-pan on their backs, and place on the breast of each a thin slice of salt pork or bacon; cover the bottom of the pan with cold water, and set in a hot oven; baste often till done. Place the birds on their backs in the dish, garnish with water-cress, sprinkle with lemon-juice all over, and serve warm.

Boiled Pigeons.—Truss them like boiled chickens, drop them into plenty of boiling water, and throw in a little salt; in fifteen minutes, lift them out, dish, pour parsley and butter over them, and send a tureen of it to table with them.

Broiled Pigeons.—Young pigeons or squabs

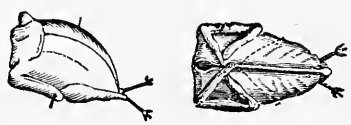
are best for broiling. Clean and wash them carefully and then wipe them dry; split them down the back and lay them breast downwards on a gridiron over a clear fire; when brown on one side turn them over. Dish them, spread them liberally inside and out with butter, and season with pepper and salt. This is one of the best of dishes for a sick-room when meat is permitted; it is almost always relished.

Fried Pigeons.—Clean and wash four pigeons, and cut each in four pieces; put two ounces of butter in a frying-pan, set it on the fire, and when it has melted put the pigeons in with two or three sprigs of parsley, a pinch of allspice, salt and pepper, and half a pint of broth; take the pigeons off when about half done, and as soon as they are cool, dip each piece in beaten egg and roll it in bread-crumbs; strain the butter left in the frying-pan, add about an ounce more, and fry the birds two or three minutes. Serve plain, or, for an ornamental dish, garnish with parsley and watercress.

Pie (Pigeon).—Clean and wash the pigeons; cut off the heads and necks, and put them aside with the livers and gizzards; boil these down for gravy, with a piece of beef, adding pepper, salt, and mace. Some cooks put the pigeons whole into the pie-dish; but they are more convenient to help at table if divided into quarters by first splitting them lengthwise down the back and along the breast-bone, and then cutting them across. Line a deep pie-dish with a thin puff paste; set an inverted cup in the centre of the dish to retain the gravy; at the bottom of the dish put a layer of lean beefsteak, or veal, or ham and bacon, as may be preferred; on the steak (or other meat) lay the quartered pigeons until the dish is full; have ready some hard-boiled eggs, peeled from the shell, halve them crosswise, and use them to fill up any hollows that may be left between the pigeons, with the view of giving to the crust as level an outside surface as possible; pour in the gravy over all, and cover with a stout crust. Bake an hour or more in a tolerably quick oven. This pie may be eaten hot, but is better cold.

Wild pigeons are better for making pies than the tame; they should be parboiled a few minutes before being cut up.

Roast Pigeons.—Take off the heads and necks, and cut off the toes at the first joint; draw them carefully, and pour plenty of water through them; wipe them dry, and either stuff like chicken, or put into each bird a small



Pigeons Trussed for Roasting.

bit of butter dipped into a little cayenne pepper; truss the wings over the backs, and roast them at a brisk fire, basting constantly with butter. Roast 20 or 25 minutes if large, and about 15 minutes if very young. Serve with brown gravy, and a tureen of parsley and butter.

Stewed Pigeons.—Draw and wash carefully, and stuff like chickens; put them into a good-sized pot, pour in enough of cold water to cover them, set on the fire, and stew gently for an hour, or until tender; then season with salt, pepper, a tablespoonful of butter, a little sweet marjorum, and a few blades of mace; stew gently five minutes longer, then stir in a tablespoonful of browned flour, and boil up once more; dish, pour the hot gravy over them, and serve at once.

PIGMENTS.—Practical directions for ordinary house-painting will be found under PAINTING. The pigments or colors most commonly employed by house-painters to mix with the white-lead, are the following:—

Blacks.—*Lamp black*, the soot of oil burned in lamps. *Ivory black*, ivory or bone burned to charcoal. *Blue black*, the charcoal of ivy twigs, or some other plants.

Blues.—*Prussian blue* is a preparation of Prussic acid and iron. *Blue verditure*, a color from copper precipitated upon chalk. *Indigo*, a color extracted from plants in India. *Smalt*, a glass colored by cobalt, and ground to a fine powder.

Browns.—*Burned umber*, a native earth. *Asphaltum*, a native bitumen. *Bistre*, a kind of soot from peat smoke. *Cologne earth*, a native pigment dug up.

Greens.—*Verdigris*, a carbonate of copper. *Prussian green*, a composition similar to the blue of that name. *Terre verte*, a native earth.

Orange Color.—*Orange lake*, the tinging part of anatto.

Reds.—*Vermilion*, a bright scarlet prepared from sulphur and quicksilver, being a sulphuret of mercury. *Red lead* is lead calcined till it becomes a red oxide. *Venetian red* is a native ochre. *Spanish brown*, also a native earth. *Lake* is alumina, the basis of alum, tinged with a dye from cochineal or Brazil wood: it differs much in quality. *Rose pink* is similar to the last, but inferior. *Red ochre* is produced by burning yellow ochre. *Burned Terra di Vienna*, the raw Sienna burned.

Whites.—*Flake white*, a superior ceruse. *White-lead*, carbonate of lead.

Yellows.—*Yellow ochre*, called often stone ochre, a native earth of various qualities. *Dutch pink*, chalk colored by French berries. *King's yellow*, arsenic combined with sulphur. *Naples yellow*, *Raw Terra di Sienna*, a native earth.

Compound Colors.—It would be an endless task to attempt to enumerate all the colors and tints produced by the mixture of other colors; but the following table showing the simplest method of making the various tints most frequently used will probably prove serviceable. To produce.

Straw Color	add	Chrome Yellow to White Lead.
Silver Gray	"	Lampblack and Indigo to White.
Rose Color / Pink	"	Carmine or Lake to White.
Pea Green	"	Chrome Green to White.
Lead Color	"	Lampblack to White.
Wood Color	"	Raw Umber to White.
Brilliant Green	"	Emerald Green to White.
Bright Green	"	Paris Green to White.
Drab Color	"	Umber to White.
Buff Color	"	Yellow Ochre to White.
Salmon Color	"	Red, Umber and Yellow to White.
Flesh Color	"	Carmine to Straw Color.
Dark Green	"	Black to Chrome Green.
Brown	"	Red and Black to suit.
Purple	"	Red to light Blue.
Pearl Color	"	Blue to Lead Color.
Orange	"	Vermilion to Chrome Yellow.
Olive	"	Chrome Yellow, Blue, Black, and Red.
Chestnut	"	White to Brown.
Chocolate	"	Yellow to Brown.
Cream White	"	White, tinted with Red and Yellow.
French White	"	White, tinted with Purple Color.
Pearl White	"	White, tinted with Blue and Purple.
Ashes of Roses	"	White, tinted with Lead Color and Lake.
French Gray	"	White, tinted with Black and Purple.

PIKE (*See* PICKEREL).—Pike are simply large-sized pickerel.

PILES.—These are swellings, situated in the region of the anus, which by their size and their liability to irritation and inflammation, cause much trouble and uneasiness, and sometimes intense pain. There are two kinds of piles, the *external* and the *internal*. External piles consist of a collection, just without the margin of the anus, of rounded hard tumors covered with thickened skin, and of prominent ridges of skin. These growths at first cause little or no pain, but as they increase in size and number the patients complain of a difficulty in passing the motions, of bearing down pains, of a sense of weight about the anus, and of a general feeling of discomfort. After a time one or more of these piles may become irritated and inflamed, and then they give rise to very acute pain, with throbbing and a sense of great heat, and to a constant desire to go to stool. These symptoms pass off in the course of three or four days, but the attacks are frequently renewed and the piles gradually enlarge and invade the lower portion of the intestine. This affection originates in distension of the veins about the anus in consequence of obstruction to circulation; but it is met with generally in those engaged in sedentary occupations, and those who, in consequence of indulgence in highly-seasoned food and alcoholic drinks, suffer from congestion of the liver. Much riding on horse-back, long-continued standing and constipation, are also causes of external piles. The presence within the anus of large rounded and soft tumors covered by red mucous membrane is called *internal piles*, which are much more serious. These internal piles when large come down through the anus from time to time, generally when the patient is at stool, and become engorged with blood and very painful; evacuation of the bowels gives rise to a burning or throbbing sensation, and as the piles increase in size becomes more and more difficult; a dull pain across the loins is complained of, and occasionally the urine cannot be passed in consequence of irritation at the neck of the bladder. The most serious symptom is bleeding, which occurs during evacuation of the bowels, when the piles are protruded and compressed by the anus; the blood is red and arterial, and is often passed in considerable quantity. Patients often remain ignorant during a long period of this frequently renewed loss, and finally suffer from extreme debility, become irritable and restless, and present a blanched countenance and a weak and quick pulse. In addition to the discharge of blood there is in most cases a constant flow of thick, slimy or purulent fluid. On examination of the region of the anus there will be seen as the patient bears down, one or more rounded protrusions of a dark red or livid blue color, and varying from the size of a currant to that of a small chestnut. These growths, like external piles, are sometimes inflamed. Then, in addition to intense pain and other severe local symptoms, there is high fever. Inflammation of internal piles sometimes ends in mortification and in expulsion of the mass of abnormal growths from the rectum. The causes of internal are similar to those of external piles. Congestion of the liver causing venous obstruction in the intestines, and direct irritation of the walls of the intestines, are the conditions which most frequently give rise to this affection. The latter condition is often due to an immoderate use of strong purgatives, especially aloes.

Treatment.—The general treatment of piles, both internal and external, consists in removing congestion of the veins of the liver and intestines, in keeping up the strength and health of the patient, and in avoiding or alleviating the results of certain conditions favorable to the development of the disease. The patient should restrict himself to a carefully regulated and temperate diet, and abstain from highly seasoned dishes, pastry, and spirits; wine and beer ought not to be taken except in moderation. Walking exercise is to be recommended, and during the summer months, sitting in the open air, but violent exercise should be avoided. The affected region should be well bathed every morning with cold water and then carefully dried. To external piles may be applied lead lotion or a weak solution of alum. For both external and internal piles the compound gall ointment is a very useful application. When internal piles protrude after every evacuation, they should then be sponged over with cold water or a solution of alum, or be smeared with gall ointment. Great attention should be paid to the state of the bowels, which ought to be kept in daily action by some mild aperient, as rhubarb in the form of a pill to be taken at night, or confection of senna, castor oil, or seidlitz to be taken in the morning before breakfast. The half-grain doses of aloes, taken three times a day, often prove curative. In cases of inflammation and great pain in external and internal piles, leeches should be applied to the

skin at some distance from the anus, and bran poultices or poppy-head fomentations be placed over the whole of the affected region. When a patient with external piles complains of almost intolerable pain in one pile which is found to be swollen, tense, and livid, an incision into this with the point of a sharp knife will often let out a small dark-red clot of blood, and give immediate and total relief. By these means the bad effects of both external and internal piles may be much relieved, or, as occasionally takes places, the disease may be permanently cured. When, however, in spite of careful attention to diet, to local ablution, and to the working and venous circulation of the abdominal viscera, the affection increases in extent and intensity, it will become necessary to undergo some surgical operation in order to obtain permanent relief. External piles are generally treated by excision, the tumors, together with the adjacent ridges of thickened skin, being removed with large curved scissors. Internal piles have been treated by various operative methods; many surgeons apply a ligature round the base or contracted portion of each pile; other surgeons prefer to cut away the pile and then to apply to the raw surface the red-hot iron. Fuming nitric acid is often applied to the surfaces of small internal piles. In cutting operations upon external piles, the surgeon, whilst endeavoring to obtain for the patient effectual relief, is careful not to take away too much of the skin lest contraction of the anus should follow the shrinking of the scar. In these operations, but more especially in those consisting in excision or incision of internal piles the bleeding is very free, and, if it should recur in the absence of a medical man, dangerous to life.

PILLAW. (*See* ENTREES.)

PILLS. (*See* DRUGS.)

PIMENTO.—The original name of the berry commonly called Allspice. (*See* ALLSPICE.)

PIMPERNEL.—The common pimpernel (*A. Arvensis*), well known as "the poor-man's weather-glass," is a little trailing plant with a pretty scarlet flower and violet mouth, common in the fields throughout the country. The flowers open about eight o'clock in the morning, and close in the afternoon, and they are so sensitive to light that in cloudy weather, especially when there is moisture in the air, they remain closed altogether. Like their glorious sisters, the morning-glories, which share with them the misfortune of being a native wild-flower, the pimpernels have been crowded out of our gardens to make room for more showy and novel plants, and are seldom seen in cultivation. A few seeds sown in the early spring will produce a constant succession of the curious little flowers year after year.

PIMPLES.—These are simply a surface eruption indicating a bad condition of the blood, and their treatment is to be sought in such medicines and such a course of diet as will eliminate the objectionable matter from the system rather than in local applications, which in most cases are ineffective or injurious, or both. The most favorably known of these local applications—*Sir William Knighton's Lotion*—is made as follows:—Mix together half a dram of liquor of potass and three ounces of spirits of wine. Apply this to the pimples with a camel's hair pencil; if it causes inflammation or irritation, add one-half pure water to it.

PINKS.—This is a popular name for the flowers more commonly called carnations, and is applied to the same order of plants as the latter; but there is one variety—the Picotee or Paisley pinks—which is not usually ranked among the carnations. The culture of the Picotee is the same as that of the carnation (*See* CARNATION); but the Picotee is the hardier of the two, and will endure the coldest winters without protection, except at the extreme north. When the flower-stems are ten or more inches high, they should be supported with stakes, and when the flowers appear, if there is danger of their bursting the calyx, and thus spoiling their symmetry, it is well to tie a bit of colored worsted yarn about them; this gives support, and retains the leaves in place. The Picotee is a profuse bloomer, and on this account makes a desirable house-plant.

PINE-APPLE.—This delicious tropical fruit is very abundant in our markets during the season for it, which commences about the 1st of April and lasts until September. There are two kinds of pine-apples, known among dealers as the *bird's-eye* and the *sugar-loaf;* the first is considered best for dessert, etc., the latter for preserving in different ways. In buying the fruit for immediate consumption, select those which look yellowish on the smooth surfaces, though this is not a conclusive proof of ripeness. If one of a lot proves green set the rest aside and keep them a few days; they are not likely to spoil and will soon mellow. No pine-apple should be eaten unless it is fully ripe, as the unripe juices have caustic properties, and are liable to irritate the coat of the stomach. It is customary in this country to cut pine-apples in horizontal slices; but in the West Indies they are sliced obliquely, in the direction of the pips. They are brought to our markets from Havana, Nassau, Matanzas, Jamaica, etc. Their usual weight is from two to five pounds. (*See* ICE-CREAM, MARMALADE, and PRESERVES.)

Pine-apple Water.—This is excellent for flavoring, and it also makes an agreeable beverage. Peel and slice a moderate-sized pine-apple, and pound it to a pulp in a mortar; put this into a bowl, and pour in a pint of boiling syrup; add the juice of a lemon, stir together, cover up, and set it aside for two hours; then filter it through a silk sieve or jelly-bag, and add a quart of clear cold water.

PIPES (Gas and Water). In the article on the HOUSE we have already spoken of gas-pipes and of the lead pipes which are now universally employed for small water-pipes. For the larger pipes, especially where water is

to be conveyed for long distances, cast-iron is superior in strength and durability to any other material. The popular idea that iron is injurious to the salubrity of water is founded on an error; for a thin black oxide soon forms upon the inside of the pipes, forming a sort of black japan, and this protects them from the action of the water. If the water contains lime the latter is deposited as a fine crust over the inside, and defends them from corrosion; and there is no danger that iron pipes will fill up with this deposit, since the water only deposits the stony matter from the attraction of the iron, which being once covered with a slight thickness of the lime, the water no longer has access to the iron. Some have put lime into the water purposely at first, when it was found that the water was so corrosive as to become tinged in running through iron pipes newly laid down; a rapid current of lime-water being passed through the whole length for several days, the pipes became coated on the inside with calcareous matter. At first, after this, the water tasted of lime, but it became pure again in a short time. *Pottery pipes* preserve the water perfectly pure; but they cannot bear much pressure are very liable to be broken by accident, and are expensive. (*See* LEAK.)

PISTACHIO NUTS.—These nuts are brought from Sicily and Syria, where they grow upon a kind of turpentine-tree. They are oblong and pointed, about the size and shape of a filbert, and have a kernel of a pale greenish color. Their taste is very agreeable, much resembling that of sweet almonds; but they are sweeter, have more flavor, and are more oily. This latter quality renders them liable to become rancid, and they do not keep well; consequently they are not imported in any considerable quantity. No nut is superior to them for dessert.

PITCH.—Pitch is simply tar, from which the essential oil has been driven off by boiling. Tar differs from common turpentine in having been extracted by heat and blackened in the process, whereas the latter preserves its natural color; but both contain the essential oil of turpentine, though this can only be obtained pure from the turpentine. To convert tar into pitch, boiling is all that is necessary.

PLAICE.—Same as *Spotted Turbot.* (*See* TURBOT).

PLAID.—This term is often applied to the color of stuffs, whereas it means a peculiar ancient dress worn in the Highlands of Scotland, and was merely an oblong piece of cloth wrapped round the body to protect the wearer from rain and cold. It is always made of a checkered pattern of various colors, there called *Tartan.* Tartan is the name of the color; plaid is that of the dress. Instead, therefore, of saying "plaid ribbons," we should say, "Tartan ribbons." The true Scotch plaid is a coarse, strong stuff, well calculated to keep out the wet, and still used in Scotland, especially in the Highlands. The stripes and squares formerly varied in their patterns and colors according to each clan; but this distinction is now little attended to. Tartan, or, as it is called, *plaid*, of wool, is manufactured both in this country and in England, and is much used as a cheap, warm, and durable material for cloaks, dresses, etc. It comes in pieces, generally a yard wide. It should be shrunk carefully before cutting.

PLANTAIN.—The plantain is allied to the banana, with which it is commonly confounded. It is about the size of ordinary cucumbers, but pointed at both ends, and grows in clusters which sometimes weigh as much as forty pounds. When ripe, it turns yellow, is sweet, of a mealy substance, tasting something like a melon, luscious, and dissolving in the mouth. It is very nutritious, is one of the most wholesome of fruits, and makes an excellent dessert. It may also be fried or roasted, converted into tarts, or preserved as a sweetmeat. Plantains are brought from the West Indies, and are in season from February to September.

PLASTER FIGURES. (To give the appearance of marble or to varnish.)—Dissolve one ounce of pure curd soap, grated, in four ounces of water, in a glazed earthen vessel; add one ounce of white wax, cut in thin slices. When the whole is melted and mixed together, it is ready for use. Having dried the plaster figure before the fire, suspend it by a string, and dip it in the mixture; when it has become nearly dry, dip it a second time, and that generally suffices; cover it carefully from the dust for a week; then rub gently with soft cotton-wool, and it will have a brilliant shining gloss. A coat of cream tinted paint will be found to answer the same purpose.

To give a metallic surface to plaster figures, take half an ounce of tin and half an ounce of bismuth; melt in a crucible; then add half an ounce of mercury. When perfectly combined, remove the mixture from the fire, and let it cool. Mix with the white of an egg, and it forms a beautiful varnish. The figure to be dipped in it, and polished when dry.

Either of these methods will prevent that peculiar decay and discoloration to which the best of plaster casts are liable when exposed to the air and dust, and especially to dampness.

PLASTERING.—The business of the plasterer begins as soon as the brickwork is thoroughly dry, and not before, otherwise there will be danger of the drying and finishing of the house being protracted. The process of covering the house-walls with plaster is called *rendering.* The first coat laid on consists of good, common mortar, mixed with hair from the tan-yards, to prevent its cracking. The second coat, called *setting*, is made of a finer mortar, consisting of lime and fine sand. The lime used in this case is called *fine stuff*, and is prepared by slacking quicklime with very little water, and afterwards saturating it with water to excess, and putting it into tubs to settle and let the water evaporate. The use of the second coat of plastering is to give a perfectly smooth surface for coloring or papering. Sometimes,

if the work is required to dry or set very soon, a little plaster of Paris is mixed with it, and it is then called *gauged stuff*. In order to secure the perfect dryness of plastering in brick houses, the walls should be *battened*. This is fixing on them upright slips of wood called battens, on which laths are nailed close together horizontally, thus leaving a cavity between the laths and the walls. The plastering being laid upon these laths, no wet or dampness that may penetrate the walls can reach the plaster; this kind of work is called *lath and plaster*. The lath and plaster for partitions and ceilings is put on in the same manner.

PLATED WARE.—The best plated-ware has received three "coats," as they are called, of the silver, and in appearance and durability is quite equal to the solid silver-ware. The demand for cheap goods, however, and the competition between rival manufacturers has rendered it common to prepare ware for the market with only one coat or even without any genuine silver at all upon it. For this reason, the following process of testing the genuineness of silver-plating on metals may be of value; it should be applied to all plated-ware of which the price is very low. Cleanse the metallic surface carefully, and place upon it a drop of a cold, saturated solution of bichromate of potash, in nitric acid; wash it off immediately. On silver, a blood-red spot of chromate of silver is formed; on German-silver, or Britannia-metal, the stain is brown or black. *Clean* plated-ware as directed for silver-ware.

PLEURISY.—An inflammation of the pleura or serous membrane, which covers the lungs and lines the greater part of the cavity of the chest. In health this membrane is quite smooth, and is lubricated by a small quantity of fluid, so that the lungs can move upon it with the least possible amount of friction; but when it is inflamed, it becomes roughened, and in most cases a large quantity of fluid is secreted, in consequence of which the lung on that side is compressed against the spine and there is much distress in breathing, as there is then only one lung available for the purposes of respiration. It follows that in those cases in which both sides are affected with pleurisy there is imminent danger of suffocation, as the lungs are unable to aerate the blood properly; and so, unless relief be afforded, or the inflammation subside quickly, death is very likely to ensue. Fortunately double pleurisy is of very rare occurrence. The most common *cause* of pleurisy is exposure to wet and cold; but it may come on after an accident in which the ribs are broken, or from stabbing or gunshot wounds, and other external injuries. In nearly all cases of pneumonia, or inflammation of the lung itself, there is more or less pleurisy; but then very little fluid is effused. The first *symptoms* of pleurisy are a severe catching pain in the affected side, and this becomes worse in taking a deep inspiration, or coughing; the pain is usually confined to one spot, and on listening there one may hear a rubbing sound due to the roughened surfaces moving on each other. There is also a feeling of weakness and lassitude, the pulse quickens, the tongue is coated white; there may be headache, thirst, and loss of appetite; the temperature of the body is raised, and the usual febrile symptoms appear. In a day or two the breathing becomes worse, because effusion of fluid is now going on; the patient is obliged to keep to his bed, and lie on his back in a diagonal position, so as to enable the healthy lung to expand, while the one affected is too sore to rest on. These symptoms go on for several days without much change being observed, but they vary in intensity according to the amount of the effusion; in some very bad cases there is much distress and anxiety of countenance, the respirations are quick and shallow, and the face pale, while the lips are livid; any exertion, as moving in bed, or talking, increases the discomfort. In less severe cases the distress lessens as the fever abates, and the breathing becomes more regular. Then comes the time when the fluid begins to be reabsorbed, and when the lung commences to expand again; but this takes up a very variable time, so that no rule can be laid down as to the duration of a pleurisy, some being of a very slight nature, while others may take weeks or even months before they are really cured. Long before this, however, the severe symptoms have abated, and the chief trouble is shortness of breath on any exertion. In most cases the patient is liable to pain in the chest afterwards, and to a recurrence of pleurisy on being overheated, or on exposure to cold and wet.

Treatment.—The patient must be at once placed in bed in an atmosphere of about 60°–65° Fahr., and the air should be tolerably moist. This can be effected by boiling some water in a kettle in the room, and occasionally letting the steam escape. The important thing is to avoid any great variations of temperature, and especially any chills to the surface of the body. Nor should the patient be moved about from one room to another, if such movement cause any distress, nor should he be allowed to talk more than is necessary. Three or four leeches applied to the spot where the pain is greatest will afford much relief, and when the bites have finished bleeding, a large hot linseed-poultice should be applied to the chest; but care must be taken that the bleeding does not recommence on applying the heat, as too much blood may in that way be drawn, and tend to exhaust the patient. Cotton-wool may also be applied for a similar purpose. It is best to have a mattress on the bed, rather than a feather-bed; as the body is then kept cooler, and it is easier to get at the patient. Light food must be given, and milk is generally borne the easiest in the early or febrile stage of the disease; light puddings, eggs, beef-tea, broth, jelly and fish may be given when the appetite returns and the tongue begins to clean. Stimulants should be given very sparingly, as in the majority of cases they are not needed,

and if given in excess tend to depress the patient and hurry the breathing. Restlessness at night is a common symptom. Opiates in doses sufficient to relieve pain are well borne, and by diminishing the difficulty of breathing contribute thus to the relief of the disease. Blisters should not be applied in the early stage when there is fever, but they must be used later on, so as to hasten the absorption of the fluid; or tincture of iodine may be painted over the affected side for the same purpose. In cases of double pleurisy it may be necessary to tap the chest and let the fluid out, and in some cases bleeding from the arm may then be attended with benefit. During convalescence the patient should be careful not to venture out too soon, especially if the weather is cold, foggy, or damp. He should sit up at first in the afternoon, and may go from one warm room to another; but no exertion must be persisted in which hurries the breathing. Tonics may then be given to improve the general health, and the ordinary diet may be resumed. All patients should be careful for some weeks to avoid exposure to bad weather, should avoid being out after sunset if possible, should not get overheated, and should always wear flannel next the skin.

PLOVER.—One of the best of the small birds for table purposes. There are several varieties of the plover, all bearing a general resemblance to each other, and being about equally desirable. The *gray plover* (sometimes called *grass*, *field*, or *upland plover*) are generally found in the markets in June, July, August and September; they are considered best in the two latter months. *Frost plover* (*greenback* or *golden plover*) are sometimes called "frost-bird" and sometimes "*plover*." They appear occasionally in numbers in April and May, and again in September and October, when they are in fine condition, and their flesh well-flavored. *Ring plover*, or *ring-neck*, are abundant in the markets in September and October, when they are considered best for the table. *Piping plover* or *beach bird*, are found in small numbers from April to October, but in September and October they are very fat, and their flesh is excellent. Prepare, cook, and serve Plover as directed for Reed-birds.

PLUMES. (*See* FEATHERS.)

PLUMS.—There are numerous varieties of this fine fruit, the best being the well-known *green-gage* which ripens about the middle of August and lasts until October. Besides the green-gage, there is the Washington, the Jefferson, white and purple Damsons, the white, red, blue, and frost gage, the purple and yellow egg, magnum bonum, apricot, and the common blue, or horse-plum. The choicer varieties of plums make a most delicious dessert, and the inferior kinds make excellent pies, puddings, marmalades, preserves, and sweetmeats. Eaten in moderate quantities plums are very wholesome; but excess in the use of them is liable to produce colic, diarrhœa, or even cholera. The danger is greater if they are eaten before becoming perfectly ripe. Plums, in some of the varieties, are generally found in the markets from the latter part of July to the middle of October. (*See* MARMALADES, PIES, PRESERVES, and PUDDINGS.)

PLUSH.—A kind of stuff having a nap resembling that of velvet on one side, composed regularly of a woof of a single woollen thread, and a double warp—one of wool, of two threads twisted, and the other of goat's or camel's hair. Some plushes, in imitation of these, are made of other materials. Plush was formerly much used for liveries, but is now out of fashion and seldom used for clothing in any form. That of English manufacture is best.

PNEUMONIA.—This is the name given to inflammation of the substance of the lungs. It may come on of itself as the result of exposure, or it may follow in the course of some other disease, and the symptoms may then differ somewhat. Pneumonia is often associated with the fevers, as typhus, typhoid, and measles, also with some blood disorders, and in these cases it adds to the gravity of the original disease; but the main symptoms of pneumonia are then either masked or modified by the associated disease under which the patient is suffering. Simple, uncomplicated pneumonia of one lung, or part of the lung, is not a formidable affection, and more than nine-tenths recover with proper treatment. The first *symptoms* of pneumonia are shivering or severe headache, pain on one side of the chest, furred tongue, and a high temperature of the body; in the course of a day or two the skin becomes very hot, the lips dry, and the tongue covered with a white, moist fur; the patient breathes quickly, and is glad to remain quiet in bed, and not be disturbed by talking; he feels a sense of pain and tightness on the affected side of the chest, has a troublesome cough, and spits up frothy, viscid phlegm, tinged with blood; the urine is highly colored and diminished in quantity. In children the nostrils are dilated at every inspiration, and they breathe very rapidly. In four or five days the symptoms are about at their height; on the seventh or eighth day, in most cases of recovery, the temperature falls rapidly, the febrile symptoms abate, and the patient feels much better; his tongue cleans, the appetite returns, and the breathing is easier. For some time, however, he feels short of breath, and several weeks may elapse before the lung clears up and becomes sound again. In severe cases so speedy a termination must not be looked for; the inflammation may spread to the other lung, causing great distress of breathing, and bringing on a livid appearance of the lips; there may be much delirium, especially in those of intemperate habits; and occasionally the inflammation does not clear up at all, but passes into one of the forms of consumption.

Treatment.—The patient must at once be put to bed in a room with a temperature of from 60° to 65° Fahr., and the air should not be too dry. Hot linseed-meal poultices or hot stupes

must be applied to the chest, and changed as often as they become cool. If there is much pain, a few leeches to the side will give relief. For pneumonia the same rules as to diet, medicines, and precautions during convalescence must be observed as are described in the article on PLEURISY. In very severe cases, the treatment must vary with the special requirements of each case; and on these, of course, only a competent physician can decide.

POISONS AND ANTIDOTES.—Give an emetic instantly! For special poisons look for their names. When poison has been swallowed it is very difficult to fix upon any particular symptoms as indicative of it; but it may be surmised that an individual has swallowed poison if, shortly after food or drink, he be seized with violent pain in the stomach, or with vomiting or purging, especially if convulsions or paralysis are present, or if the individual suffer from great giddiness or delirum, or if there be a strong tendency to sleep. Whenever these symptoms appear, and especially when any poison is known to have been taken, three things have to be done:—1st, *To get rid of the poison.* 2nd, *To stop its effects.* 3rd, *To remedy the evil it has done.* It does not matter which of the first two is attended to first. To save time is the important thing; "whatever is readiest is best" is emphatically the rule in dealing with poisoning; better the poorest remedy given at the moment, than the very best given an hour later. There is this, however, to be said, as far as the general public are concerned, that they always have the means of getting rid of the poison by them, but not always the means of stopping its action or remedying its effects; so that, generally speaking, the former should be attempted in the absence of medical aid. A considerable number of all poisons are self-evacuating; having been taken, they produce vomiting and purging and are thereby eliminated. In such cases all that it is necessary to do is to aid the self-evacuating process; especially to aid the vomiting, and so perhaps get rid of the poison altogether. Ordinarily two different methods are employed to get rid of the substance in the stomach: these are the stomach-pump and vomiting. It requires considerable skill to use the stomach-pump, and usually where one can be obtained, the skilled aid necessary for its employment can also be obtained. In passing the tube down into the stomach the important rule is to use as little force as possible, and to make the point of the tube slide along the posterior wall of the gullet. Grievous accidents have resulted from unskilful use of this instrument, and so any one not acquainted with it and attempting to use it should attend implicitly to the foregoing rule. There are, however, certain cases—as when violent corrosives have been swollowed—where the tissues are so much softened that an attempt to pass the stomach-pump would very likely end in driving it through the tissues, and in these cases such attempts must be avoided altogether. The advantage of the stomach-pump is that it enables you to wash the stomach out and empty it without any action on the part of the stomach itself. In cases where the stomach is paralysed, as it sometimes is in opium poisoning, this is of very great importance.

In cases where, from whatever cause, the stomach-pump cannot be employed, we have left to us the self-evacuation known as vomiting. This sometimes is one of the results of the poison itself; in others it must be excited. If, as most irritants do, the poison have given rise to vomiting, it may only be necessary to encourage it. This is best done by tickling the fauces with a feather, and by copious draughts of luke-warm water. This process, though exhausting, must be continued until everything seems expelled from the stomach. Sometimes, however, there is no vomiting, and then something must be given to cause the stomach to get rid of its contents. Here the same rule that the readiest is best prevails. It is useless, or worse than than useless, to wait till an emetic is brought from the druggist, if that be far away the resources of the locality must suffice. Three things may be made use of as emetics, which are to be found almost everywhere. These are mustard, salt, and smelling-salts, besides the stimulation of the fauces with the finger, and the use of lukewarm water. Smelling-salts are not suitable for all cases, but are good in a certain number of cases of poisoning, especially by vegetable substances, which give rise to narcotic symptoms. The dose of this is a teaspoonful given in a pint of lukewarm water, and followed up by copious draughts of the same. Mustard is a better emetic, and is generally to be had; its use is limited to those cases where there is no violent irritating effect produced by the poison. Usually it suits best where there is a sedative effect produced by the poison, and the stomach requires a stimulant to call its action into full play. The dose of mustard is a tablespoonful mixed up with a pint of lukewarm water, and followed by copious draughts of the same. Salt can always be had, and a handful of this dissolved in water will usually suffice to produce copious vomiting, and so the evacuation of the stomach contents. Ipecacuanha is a most useful emetic in cases where the stomach has been already irritated, and it is desirable to effectually get rid of any irritant substance which may remain. It is best given as ipecacuanha wine; half an ounce for a dose.

When the poison has been administered locally, as in snake-bite, it may be necessary to scarify the wound, so as to make it bleed freely, to suck it, and, if necessary, to apply a ligature round the limb, higher up and nearer the heart, if the wound be so situated as to admit of this, so as to prevent the passage of the poison upwards towards the heart and nervous centres. Washing, too, should be freely employed, especially by means of a heavy stream of water.

Frequently, however, the simple plan of getting rid of the poison will not suffice. Its effects

have to be neutralized or remedied. That means practically, that some antidote must be given. Now, no single antidote is suited to all emergencies,—the antidote must be adapted to the particular poison; the subject, therefore, naturally distributes itself, at this point, into the different poisonous substances which are used about the house in one shape or another. These are treated of separately in their proper places.

POISON PLANTS.—The only poison plants worth taking into account in the populated parts of the United States, are the poison ivy (sometimes called Poison Oak) and the poison sumach (sometimes called Poison Dogwood).

Poison Ivy. (Poison Oak) in flower, Branch, ¼ natural size. Below, berry of the natural size.

Poison ivy appears in two forms. One is a low shrub seldom over three feet high, except in California where it is said to have attained the dimensions of a tree, with a trunk six inches thick. In this form of a shrub or tree, the plant is generally known as **Poison Oak.** In its other forms it is a vine, clambering over walls or trees, sometimes to a great height. In either form, the leaves grow in threes, as in the cut, and in June and July it ordinarily puts forth greenish white berries. When wounded, it exudes a milky juice which becomes black on exposure to the air, and does not wash off.

Poison Sumach.—A plant known also as swamp sumach and as poison dogwood. It flourishes principally in marshy ground in various parts of the United States and other countries where the temperature is not excessive in either direction. It is not to be confounded with the beautiful plant generally known as sumach, with light green leaves and bunches of bright red berries.

Poison sumach is a beautiful shrub or small tree varying in height from six to eighteen feet. The bark is dark grey. The flowers (which of course are not visible upon it at all seasons) are small and of a greenish white color, and it bears nearly round pale-green or whitish berries. These are generally to be seen only in June or July.

The number of leaves on the separate stalks varies from seven to thirteen.

Symptoms.—The sumach is more poisonous than the ivy. The juice of these plants applied to the skin produces some inflammation and is apt to cause the appearance of small water-blisters. But perhaps their damaging effects are most frequently conveyed by some volatile principle pervading the air to the distance of several feet, though the distance at which one person can be affected is not a very reliable guide for another. It is asserted that some people can handle the plants (or even chew the ivy) with impunity. In other persons, however, they produce an affection not unlike erysipelas. The worst effects are generally in the face. They begin with redness and itching, followed by swelling, water-blisters, and the peeling off of the skin.

The symptoms appear within a day of exposure, and generally decline within a week.

Poison Sumach (in fruit), Fig. ¼ natural size. Below, fruit of the natural size.

Treatment.—A good dose of Rochelle salts, and keeping the irritated surface moist with a solution of one drachm of acetate of lead in a pint ofwater

Prof. Proctor recommends a solution of a teaspoonful of baking soda in a pint of water, to be applied *immediately after exposure*, without waiting for symptoms to develope.

The well known extract of Witch Hazel has also been recommended as a wash. A child—a patient of the writer, was bathed in it frequently after an ugly water blister from poison oak had displayed itself, and no farther inconvenience was suffered; but the probability is that the patient was not very susceptible to the poison.

Whatever application is made, it is well to

anoint the whole body on the plan of a preventive, as suggested by Prof. Proctor.

Eradication of the plants should of course be effected when they are at all likely to be approached by people, but this is not as easy as would at first appear. When cut down or even covered with stones, they are apt to reappear, and they like to climb between stones. Dr. Squibb recommends covering the spot with ashes. Others recommend salt.

POMADES.—Pomades, or pomatums, are preparations for softening the skin and hair, and consist of fats or oils, with the addition of some perfume. It is necessary to choose such fats as do not become rancid; the best are clarified *beef suet*, or clarified *beef marrow*, and *hog's lard*. Beef or mutton suet and hog's lard are clarified from the raw materials by chopping them fine, and rolling them out to break the cells in which the fat is lodged, then melting the fat in a water-bath, or by other gentle heat, and straining it while warm. It should then be put into bladders, to keep it from the air. Or it may be made by boiling it in water, and skimming it off when cold; but by this method it contains water, and does not keep so well as when melted by itself. Purified beef marrow is considered preferable to hog's lard, and is thought by some to make the hair grow.

I. Common soft pomatum is made of equal parts of beef or mutton suet and hog's lard melted together; while they are liquid add a little oil of bergamot, or any other perfume that may be agreeable, beat the whole well together, and then pour the mixture into pots.

II. Another method is to soak in water for two or three days half a pound of clean beef marrow and a pound of fresh hog's lard, changing the water and beating every day. Put it into a sieve to drain, and, when dry, into a jar, and the jar into a saucepan of boiling water; when melted, pour it into a bowl, and beat it with two teaspoonfuls of brandy; drain off the brandy, and add bergamot or any other perfume.

III. Another still: melt together an ounce of hog's lard, one of beef marrow, one of spermaceti, and a pint of almond oil; add oil of bergamot and oil of roses, or any other perfume.

Castor-oil Pomatum.—Take tuberose pomatum, one pound; castor-oil, half a pound; almond-oil, half a pound; otto of bergamot, one ounce. Melt the grease, then beat it up with a whisk or wooden spoon for half an hour or more, as the grease cools; minute vesicles of air are inclosed by the pomatum, which not only increase the bulk of the mixture, but impart a peculiar mechanical aggregation, rendering the pomatum light and spongy.

Hard Pomatum is made by melting together two parts of beef suet and one part of mutton suet, and making it up into rolls with paper around them.

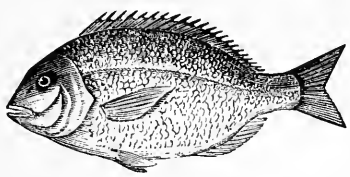
Sultana Pomade.—Melt together half a pound of beef suet, the same of bear's grease, an ounce of white wax, and two ounces of olive-oil; and add to it, tied up loosely in muslin, one ounce of bruised cloves, half an ounce of cinnamon, two bruised tonquin beans, and four grains of musk; strain and put into pots. The article called bear's grease, usually sold in the shops, is little else than perfumed beef-marrow; and the many oils offered for restoring and softening the hair are chiefly olive or almond oil perfumed with different scents.

POPLIN.—A cloth composed of a warp of silk and a weft of worsted, but containing more silk than bombazine, which is similar. It is much used for ladies' dresses. There are several varieties. *Irish poplin* has long been celebrated, and is unsurpassed for richness by any other fabric; it is manufactured in Dublin. Besides the Irish, there are *brocaded* poplins, *figured* poplins, and *watered* poplins. Poplin is generally a yard, and sometimes a yard and a half, wide.

POPPY CAPSULES. — The capsules or fruit of the opium poppy grown in this country and gathered before they are quite ripe. They contain some opium, and the numerous seeds in their interior, called maw-seeds, contain a bland oil; consequently a decoction of these capsules possesses a doubly-soothing property from the opium and from the oil. A warm fomentation is prepared by boiling some of the capsules in water; any injured part may be bathed in this fluid while it is warm. Sometimes a poultice is made with the fluid, and applied to bruises and other injured parts where the skin is whole. The quantity of opium contained in the capsules is very variable; and on this account no preparation of the capsules ought to be used internally, though there are two medical preparations of them which are intended for this purpose, — an extract and a syrup. This syrup used to be given to children, but it is dangerous and should be banished from medical practice.

PORCELAIN. (*See* EARTHENWARE.)

PORGEE.—Big porgee (or *porgy*, *scup*, *scuppaug*) is a fish which would be more valued, perhaps, if it were less abundant. It is a little dry, but is well flavored and savory when properly



cooked. They begin to appear in the markets in April, but their regular season begins in May and lasts until December; they are best in the fall months. They weigh from half a pound to two pounds, the average being less than one pound.

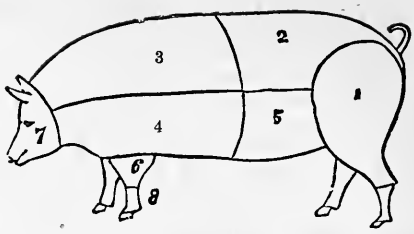
The **Sand Porgee** is smaller and has five or six dusky bars across the back. It weighs about six ounces, and is very good for frying. In season in the months of August and September. Prepare, cook and serve porgee as directed for MACKEREL.

PORK.—Pigs or hogs when killed under six weeks old, are called "roasting pig," or "roaster." (*See* PIG.) those older than six weeks, but under one year, are called *shoats*, and their meat *shoat-pork*. The meat of the full-grown hog is called pork, when it is fresh, and when cured, bacon, ham, etc. Shoats or hogs should be penned up two or three months before slaughtering and fed well. The hog is indolent naturally and filthy in its habits; yet on the growth of no domestic animal is the advantage of cleanliness more obvious. The kind of food given has a very great influence on the quality of the flesh. Skimmed milk, or butter milk and peas, oats and barley-meal, rank first in excellence as food for making delicate pork. Milk alone will fatten hogs and milk-fed pork is the most delicate of any. Grain-fed pork is next in value; peas, oats, barley, and Indian-corn being best. Pork fed on beans is hard and ill-flavored; that fed on grains exclusively has the fat spongy; potatoes make a light, insipid flesh; and butcher's offal causes the flesh to be full of gravy, but to have a disgustingly strong taste and smell. As good a diet as can be devised for hogs that have been penned previous to slaughtering, is to feed them at first on swill, vegetables, and wet grain of any kind, and towards the end to give a considerable proportion of dry Indian corn.

Pork differs from beef and mutton, not in flavor only, but in the larger proportion of fat to lean flesh. This is due both to the nature of the animal and its tendency to store up fat, and to the habit of so feeding and treating it that this tendency may be fully developed. As to its relative value as food, Dr. Edward Smith says: "Pork having so very large a proportion of fat cannot be regarded as equal to beef or mutton in nourishing the system of those who make much muscular exertion. Moreover, there is a peculiarity about pork by which it is believed to be less digestible than other kinds of flesh, and it appears to me that this is due to the greater hardness of the muscular fibre, by which the mastication of it is rendered so difficult that much of it is swallowed in pieces too large for immediate solution in the juices of the stomach. This attends the eating of pork by all persons, but particularly by those who habitually masticate quickly, or who have defective powers of mastication, or who are careless in performing the act of mastication—classes embracing the old and the young, and no inconsiderable proportion of those of intermediate ages." Owing to its excessive fatness, fresh pork is considered unwholesome during the hot months, and it should be eaten sparingly, perhaps, at any time.

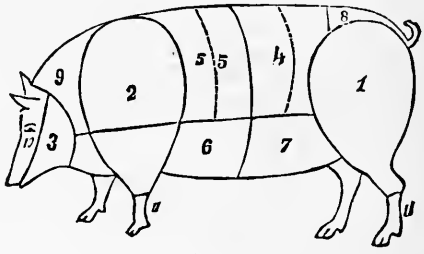
In butchering for the markets, the pork is cut up into pieces, as shown in the accompanying engravings.

The choicest pieces are the *leg* and *shoulder*, and for roasting, the *loin-pieces*. The *brisket* is generally used for corning; the *chine* for roasting, or the ribs for rib-chops, up as far as the blade-bone, and the rest for pork-steaks; some prefer the chine (after taking out all the bones) for sausage-meat.



Shoat Pork.

1. Leg of pork.
2. Loin of pork. } often cut
3. Chine of pork. } together.
4. Brisket of pork.
5. Flank of pork.
6. Hocks.
7. Pig's-head.
8. Pig's feet.



Hog.

1. Leg, or fresh ham.
2. Shoulder (after being trimmed)
3. Chops or cheeks.
4. Loin pieces.
5. Rib, or chine-pieces.
6. Brisket.
7. Flank.
8. Tail-piece.
9. Neck-piece.
10. Pate or skull.
11. Feet.

In choosing pork, take a thin piece of the lean between the finger and thumb, and if of good quality it will readily yield to a smart squeeze. The color ought to be pale rather than deep red. The rind also should be thin and delicate. The freshness is indicated by the transparency and freedom from any green tint or unwholesome smell. Measly pork is known by the fat containing enlarged glands, called kernels, and by the lean yielding little specks of matter on pressure. This is not wholesome, or indeed fit for human food. (*See* BACON, HAM, LARD, and SAUSAGE.)

Beans and Pork.—Take a pound of salt "middling" of bacon, parboil it, and score it thin. Soak a quart of dried beans over night in lukewarm water, changing the water once or twice; put them on to boil in *cold* water, and when they have boiled soft, drain off the liquor, put the beans into a deep dish or baking pan, scoop out a hole and bury the bacon in the middle, and add a very little warm water; bake in a moderate oven to a crisp brown.

Boiled Leg of Pork.—Take a leg that has been salted or pickled for about ten days, rinse it well in cold water, and let it drain. Boil it exactly as directed for hams, only for a shorter time; about three hours from the time of boiling up will suffice to cook a moderate-sized leg of Pork thoroughly. When once the boiling point is attained, the more slowly it is boiled

the better. When done, place the leg on a dish and peel off the skin, which ought to be so tender as not to come away entire; after it is peeled, either spot the surface of the pork with patches of ground allspice—an ornament not unpleasing to the eye or to the palate—or sprinkle bread-crumbs over the surface and set it in an oven to brown. In either case, after transferring it to the hot dish on which it is to be sent to table, garnish with sprigs of fresh parsley.

Boiled Leg of Pork is improved by being stuffed with parsley. Chop the parsley as fine as possible, and mix with it a little pepper and allspice. Insert a sharp-pointed knife into the knuckle-end of the leg, close to the bone; let it follow the bone for *nearly* its whole length, so as just *not* to come out at the other end. By working the knife, detach the flesh from the thigh-bone, so as to form a sort of pocket, into which stuff chopped parsley as firm as you can ram it. The leg must then be boiled and finished off as before. It will be much the better, both in flavor and appearance, for this stuffing of parsley, especially when cold; and the orifice made, allowing the boiling water to penetrate to the central parts of the leg, will tend to further its thorough cooking.

Brawn.—Take a pig's-head weighing five or six pounds, clean and wash it carefully, and set it in a pot on the fire, with enough cold water to cover it; add a pound of lean beef, and stew until the meat on the pig's-head will fall away from the bones; then drain off the liquor, remove the bones and chop the meat very fine while it is hot; season with a small onion minced fine, a teaspoonful of salt, a half teaspoonful each of black pepper, cayenne pepper and mace, and a pinch of pounded cloves; mix well into the meat, and pour all into a mould that has been previously rinsed out in cold water. This is very nice.

Broiled Corned Pork.—Take some nice slices of corned pork, and broil quickly over a hot fire; mix some pepper and salt with a teaspoonful of mixed mustard and a little vinegar, add a tablespoonful of butter, and spread the whole over the pork. Serve hot for breakfast.

Chops and Steaks.—Chops from the chine, and steaks from the loin are best. Remove the skin, and trim away the superfluous fat; dust on both sides with pepper and salt, and broil or fry them. They may also be dipped in egg and bread-crumbs and fried. A good way is to broil them without seasoning, and when dished, add salt, pepper, a pinch of sage, and another of minced onion; then cover closely and set in the oven five minutes till the aroma of the seasoning flavors the meat. Tomato catsup is the best condiment for pork chops or steaks; or they may be served with apple sauce.

Italian Pork Cheese.—Chop, not very fine, one pound of lean pork with two pounds of the inside fat; strew over and mix thoroughly with them three teaspoonfuls of salt, one and a half teaspoonfuls of pepper, half a teaspoonful of mace, one small nutmeg, and half a teaspoonful of mixed parsley, thyme, and sage, all minced extremely small. Press the meat closely and evenly into a shallow tin, and bake it in a very gentle oven from an hour to an hour and a half. It is served cold in slices. Should the proportion of fat be considered too great, it can be diminished on a second trial.

Pickled Pork.—Make the brine and treat the pork exactly as directed for PICKLED BEEF.

Pie, (*Pork.*)—**I.** Take three parts (in weight) of lean spare-rib or loin of pork, and one of veal; cut all the meat away from the bones, divide it into dice, and mix it together, seasoning well with salt, pepper, and allspice. Break the bones, and boil them, together with a few sweet-herbs, until all the substance is out of them; strain off the broth, and reduce it by boiling if too much in quantity. If the pie is to be served in the baking-dish, there is no need of an undercrust; otherwise butter the bottom and sides of the dish, and line it with a good stiff paste. Spread over the bottom of the dish a few very thin slices of ham; then put in the chopped meat, adding at pleasure hard-boiled eggs quartered, and small force-meat balls. Pour in enough of the broth to moisten the meat but not to soak it; cover the whole with a top-crust; and bake thoroughly in a slow oven. This pie is to be eaten cold. It is very nice for travelling or picnics.

II. (*Pork and Apple.*)—Take pork-chops, and remove as much of the fat as possible; cut each into three or four pieces, leaving the bone attached to the meat; roll them in flour, and season with salt, pepper, and allspice. Peel, quarter, core, and slice some apples, in quantity about half that of the pork. Pour a teacupful of cider or broth into the pie-dish; at the bottom put a layer of pork, then a layer of apples, then another layer of pork and so on, finishing with sliced apples at the top; pour in another teacupful of cider or broth; cover with a solid crust, not too rich in butter or fat; and bake thoroughly in a slow oven. This old-fashioned dish is palatable and wholesome, and may be partaken of fearlessly by those who are afraid of pork in most of its other shapes.

III. Pot-pie.—The chine is best for this, but it may be made of any lean pork; cut the meat into strips as wide and half as long as the middle finger, and break the bones; grease the inside of a pot which is round at the bottom, and line it with a light paste; put in first a layer of the meat, then a layer of potatoes, parboiled and cut in half, and seasoned with pepper and salt; proceed in this way till the pot is nearly full, then pour in a quart of cold water, and cover with a stiff top-crust; cut a round hole in the top through which hot water may be added should the gravy boil away too fast. Put on the lid of the pot, and boil from one hour and a half to two hours. When done, remove the upper crust carefully, turn out the meat, etc., into a bowl, lift out the lower crust and place it upon a hot dish; arrange the meat, etc., in order upon it, pour the gravy over it, cover it with the top crust, and serve. This is good either hot or cold.

Pig's-Ears.—I. (*Boiled.*)—Soak the ears in warm water for a few minutes, then wash and clean them well, and scrape off the hair. Drop them into boiling water for two minutes and take from the fire; add four onions for four ears, one carrot, salt, and pepper; leave just water enough to cover the whole, and boil till tender; then drain and serve.

II. (*Broiled.*)—Prepare and cook as above; then dip them in beaten eggs, roll in bread-crumbs, place on a gridiron over a clear fire, and broil about two or three minutes. Serve with a *maître d'hôtel* sauce.

Pig's-Feet.—(*Fried.*)—Make a batter with a little flour, one egg, water, and a little salt, dip the feet in till they are well covered; have some fat scalding hot, and fry them in it until quite brown. Serve with drawn butter, and a little vinegar.

Pig's-Head.—(*Roasted.*)—Take the head of a half-grown pig; clean and split it, taking out the brains and setting them aside in a cool place. Parboil the head in salted water, drain off this, wipe the head dry, and wash all over with beaten egg; dredge thickly with bread-crumbs, seasoned with pepper, sage and onion, and roast, basting twice with butter and water; then with the liquor in which the head was boiled; at last with the gravy that runs from the meat. Wash the brains in several waters until they are white; beat to a smooth paste, add one quarter pint fine bread-crumbs, and season with pepper and salt; make into balls, binding with a beaten egg; roll in flour, and fry in hot fat to a light brown. Arrange about the head when it is dished. Skim the gravy left in the dripping-pan, thicken with brown flour, add the juice of a lemon, and boil up once. Pour it over the head, and serve.

Pig's-Head Cheese. (*See* SOUSE, *below*).—

Pig's-Liver (*Fried*).—Cut the liver in slices half an inch thick; pour boiling water over them and then drain it off; put into a frying-pan and let the liver cook in its own juices, turning it till it looks brown on both sides. Take it up, and pour into the frying-pan enough cold water to make the desired quantity of gravy; put in an onion minced fine, add a bit of butter, and a little salt and nutmeg, and let it boil up once; put back the liver for one minute, then dish it, pour the gravy over it, and serve hot.

Roast Pork.—The following are the best for roasting, in the order in which they are named: leg, loin, shoulder, spare-rib, and chine. When the skin is left on the joint which is to be roasted, it must be scored in narrow strips of equal width, before it is put to the fire, and laid at a considerable distance from it at first, that the meat may be heated through before the skin hardens or begins to brown; it must never stand still for an instant, and the basting should be constant. Pork is not at the present day much served at very good tables, particularly in this form; and it is so still less with the old savoury stuffing of sage and onions, though some eaters like it always with the leg: when it is ordered for this joint, therefore, prepare it as directed under STUFFINGS, and after having loosened the skin from the knuckle insert as much as can well be secured in it. A little clarified butter or salad oil may be brushed over the skin at first, particularly should the meat not be very fat, but unless remarkably lean, it will speedily yield sufficient dripping to baste it with. Joints from which the fat has been pared, will require, of course, far less roasting than those on which the crackling is retained. Brown gravy, and apple or tomato sauce, are the usual accompaniments to all roasts of pork. Spare-ribs and chine-pieces are dryer and consequently require more careful basting (with butter if necessary) than the other joints.

A leg of pork weighing 8 lbs will require three hours to roast; loin or shoulder of from 5 to 6 lbs, with the skin on, two to two and a quarter hours; spare-ribs of 6 or 7 lbs, an hour and a half; chine, about twenty minutes to the pound.

Souse of Pig's Ears and Feet.—Take pig's ears and feet, clean them thoroughly, and soak them in salt and water several days. Boil them till tender and split them, and they are then ready for frying. If it is desired to keep them some time, soak as above in salt and water, and then turn boiling vinegar over them, strongly spiced with pepper-corns and mace; cloves improve the taste but turn them a dark color. They will keep good in this pickle five or six weeks. Either fry them plain in hot fat; or make a batter with milk, egg, flour, and butter, and dip them in it before frying; or dip each in beaten egg and then in pounded cracker. The feet are excellent eaten cold.

Souse of Pig's Head.—Boil a pig's head (with the ears on) until the bones come out, and then chop the meat up very fine; pound about eight soft crackers very small, and mix them with the meat (or the crackers may be omitted altogether); season to taste with sweet herbs, spices, salt, pepper, and a little vinegar; mix the seasoning in thoroughly, put the souse into a mould, and press it for two or three days. The souse is then ready for use, but if it is desired to keep it several weeks, take it from the moulds, set it in stone jars and cover it with cold vinegar. It will keep then a month or six weeks; if it proves too acid, pare away the outside. This souse is usually sliced thin and eaten cold; but the slices may be warmed in a frying-pan with a little butter, or dipped in egg and cracker-crumbs and fried.

Stewed Pork.—Bits of lean that cannot be used in any other way will answer for stewing. Cut the pork in pieces about an inch square, put them into a pot and pour on enough cold water to cover them; cover closely, and stew about forty minutes; then add a few Irish potatoes, parboiled, skinned, and cut in thick slices; season with salt and pepper, a minced shalot, a bunch of sweet herbs, and a table-spoonful of catsup; cover again and stew twenty minutes longer, or until the pork is quite tender.

PORRIDGE.—Set a pint each of milk and water over the fire; make a thin batter of a tablespoonful of Indian meal and a tablespoonful of flour, and pour it into the boiling milk and water; salt it to the taste, and boil ten minutes. This is excellent for the sick-room when stronger food cannot be tolerated. For oatmeal porridge, *see* OATMEAL.

PORT WINE.—Pure Port is a dark purple, astringent, and full-bodied wine brought from Oporto in Portugal; but it is so generally, we might almost say so universally adulterated, that it would probably not be possible to obtain in this country a bottle of it absolutely pure. Even the *London dock Port*, which claims to be the wine as shipped from Oporto, has been shown by Dr. Hassell to be adulterated and "doctored" to a shocking degree; and it is said that more Port is sold in London alone than the entire vintage ever amounts to. The qualities of good Port are: richness of flavor bordering upon sweetness; brightness of color, hue neither purple nor reddish, nor too deep; a generous, fruity taste; and oiliness rather than dryness. It should run smooth on the palate, and be free from all heat, harshness, and acidity. The wine purchased in bottles should be of the right age, neither too green nor too light (*see* WINES); they should be clear and bright, supposing the crust or deposit undisturbed. The *beeswing* is of little moment; it is a natural deposit, in which potash predominates, and can be produced at any time in new Port by putting the bottles into warm water, raising it to the boiling point, and then placing them in a cool cellar. Perhaps the most easily applied test of good Port is this: The cork, when it has dried, that is to say, an hour after it has been drawn, should be covered on its under surface, and part of its cylindrical surface, with crystals of tartar. If a good stock be wanted buy in the wood, and manage it yourself; if but little, buy in the bottle. The Port manufactured in England (and this is the kind usually sold here) requires to be kept three or four years in the wood and as many more in the bottle, in order to destroy the fiery strength of the brandy with which it is mixed; but before that time elapses the vinous characteristics are often completely lost.

Port should be drunk at about the temperature of the room; at dinner, with or after dessert.

Mulled Port.—Put half a pint of water into a sauce-pan, with three ounces of sugar and a little nutmeg and cloves; boil all together for a few minutes; then add from six to twelve wineglassfuls of rich port wine, and let it boil up once; pour into a pitcher and it is ready for use.

POSSET, Ale.—Boil a pint of new milk with a slice of toasted bread; pour a bottle of mild ale into a bowl, sweeten and add spices, and then pour the boiling milk over it. A fine bead or froth should rise.

Sack Posset.—Boil a pint of cream with some grated sweet biscuits; add sugar and season with cinnamon and nutmeg; warm two wineglassfuls of sherry, and stir into the cream; then pour the whole rapidly from one vessel to another until it is perfectly smooth. Or it may be made with eggs beat up in milk instead of cream.

Treacle (Molasses) Posset.—Set half a pint of new milk and half a pint of water on the fire in a sauce-pan, stir in two tablespoonfuls of molasses, and boil up. Or it may be made of milk without water if desired very rich.

PORTER.—Porter is made almost exactly like ale (*see* BREWING), the chief difference between it and ale being that the former derives a dark color and astringent taste from the use of brown or highly dried malt; that it contains more hops than ale, and that the saccharine matters have been more exhausted in the fermentation. Porter, as compared with ale, may be considered a *dry* malt liquor. It is considered more wholesome and nourishing than ale, when pure; but it is also believed to be more generally adulterated; that is, the characteristic dark color is no longer produced by the use of brown or dried malt, but by coloring substances and drugs. The common American porter has about the same percentage of alcohol as ale, and is mild as compared with English porter.

Brown Stout is, or ought to be, a superior kind of porter; but nothing can be inferred as to its quality from its color, as that is artificial. *London porter* and *Dublin stout* are excellent porters, the latter being generally preferred in this country. All these porters are, of course, imported, and are sold only in bottles.

POTS. (*See* IRONWARE.)

POTASH.—This was formerly called the vegetable alkali, because it is obtained from the ashes of land vegetables. When the ashes are mixed with water the potash is dissolved, and the earth and impurities settle to the bottom. This water is then evaporated by boiling in iron pots, and the solid substance that remains is the *potash* of commerce, so called from the manner of its production. When this is strongly heated in a furnace, it becomes whiter and stronger, and is then *Pearlash*. These substances, however, are not pure potash, for they are united with carbonic acid, being thus *carbonate of potash*. Potash deprived of the carbonic acid by another process is called *caustic* potash, which instantaneously acts upon and corrodes animal substances, and is used by surgeons in some of their operations. The ordinary potash preserves somewhat of its causticity, as may be observed from its effects upon the skin in washing. Potash, both mild and caustic, is an extremely useful substance, being employed in medicine, and for domestic purposes in a great variety of ways, which are described under their respective heads. It is also extensively used in the manufacture of soap, in bleaching, scouring, etc. *Salt of Tartar* is an impure carbonate of potash.

POTATOES.—Of all fresh vegetables grown in temperate climates none is so valuable as

the potato when we have regard to its agreeable flavor and its nutritive and medicinal qualities. A native of America, and unknown in Europe until introduced into England by Sir Walter Raleigh in 1584, it has now been adopted in almost every quarter of the globe. It is the more valuable as it grows readily in nearly every climate, and its culture is extremely easy. It will succeed well on land which will not produce grain, and under favorable conditions a given quantity of land will produce many times more food than the same quantity sown with wheat. The best qualities of potatoes are grown in tolerably rich garden soil. Cut the seed potatoes up so as to leave an "eye" in each piece, and plant in the early spring, in rows about three inches deep and two feet apart; heap the earth up in ridges, and when frost comes cover them with straw,—or whenever the tops wither they may be dug and stored in a dry cool place, but secure from frost. Of the many varieties, *Early Rose* is as yet unsurpassed, both in its early ripening and in its prolificness; the *Peerless* is one of the best late potatoes in cultivation: it grows to a very large size, is of pearly whiteness, and has a delicious flavor; *Jersey Peach Blows* are always good, but do not yield so plentifully. Besides these there are the *Carters*, *Kidneys* (black and white), *Mercers*, *Buckeyes*, *Prince Alberts*, *Western Reds*, *Dikemans*, *Yellow Pink-Eyes*, *Jackson-whites*, *Northern-whites*, *Junes*, *Dovers*, etc.

The first new potatoes received in the New York markets in the Spring are the *Bermudas;* they arrive in April. About the first of June come the *Charlestons;* about the 20th, the *Norfolks*, and early in July those from New Jersey and Long Island. The old potatoes are at this time scarce, poor, and not much sought after.

The sooner potatoes are placed in a dark cool place after they are taken out of the ground, the better they will be both for keeping and eating; if exposed to the light and to drying winds, they lose flavor and are otherwise injured.

Potato-flour is in fact, dry starch powder procured from the potato, and is much used in French cookery in fine bread and pastry; it is also sold in the stores here, but often as arrow-root, to which it is inferior.

Sweet Potatoes.—The sweet potato is a tuberous root, of quite a different species from the common potato. It is also a lighter food, but is sweet, wholesome, and very nutritious. There are many varieties, differing in size shape, color and flavor; but it is seldom that more than two kinds appear in our markets—the red or purple, and the white or yellow. The former are mostly cultivated in the Southern States, and are esteemed for their large size, and sweet flavor: the latter are grown in the Northern States, chiefly in New Jersey. Sweet potatoes are in season from August until December, after which they begin to lose their flavor, and towards Spring become spongy, and almost uneatable. They will keep through the winter, however, in cool, dry cellars; or, as in the South, banked up with earth to keep out the frost.

A la Creme, (*Potatoes.*)—Cut some cold boiled potatoes into small pieces. Put into a saucepan three tablespoonfuls of butter, three tablespoonfuls of parsley chopped fine, salt and pepper; stir together until hot, add a teacupful of milk or cream, thicken with two teaspoonfuls of flour, and stir until it boils; add the cold potatoes, boil up once and serve.

A la Maitre d' Hotel.—Cut cold potatoes into rather thick slices. Put two tablespoonfuls of butter into a stew-pan and add a teaspoonful of flour; when the flour has boiled a minute or two in the butter add by degrees a teacupful of broth or water; when this has boiled up put in the potatoes, with chopped parsley, salt, and pepper. Let the potatoes stew for five minutes, then take them from the fire, and when the boiling has subsided, add the yolk of an egg beaten up with a little lemon-juice and a teaspoonful of cold water; as soon as the sauce has set, dish the potatoes and serve hot.

Baked Potatoes.—Wash and put them whole and unpeeled into the oven and bake from half an hour to an hour. Serve immediately.

Baked Sweet Potatoes.—Bake them longer than Irish potatoes. Or, boil till about half done, and then transfer to the oven and bake. This is the best way of cooking old potatoes.

Boiled (New) Potatoes.—Procure them of nearly equal size, and, if young, wash them only; if older, rub off the skin with a scrubbing brush or coarse towel. Drop into boiling water and boil fifteen or twenty minutes, or till tender; when dished, sprinkle a little salt over them, put in a lump of butter, shake up, and serve.

Boiled (Old) Potatoes.—Pare or merely wash them as preferred, and put them into a sauce-pan of cold water with a teaspoonful of salt; boil them till they are done, which can be readily ascertained by sticking a fork into them; then drain the water from them and hold the saucepan (with the lid off) over the fire for two or three minutes, shaking well at the end of the time; put the lid on loosely so as to allow the steam to escape, and sprinkle a very little salt over the potatoes. Let them stand till wanted; they may remain in this half an hour or more, but the sooner they are eaten the better.

Boiled (Sweet) Potatoes.—Select them as nearly the same size as possible, wash them, and put them into cold water without any salt; boil till a fork will easily pierce the largest one; then take up and lay in the oven to dry for a few minutes. Remove the skins before sending them to the table.

Broiled Potatoes.—Parboil, slice lengthwise, and broil on both sides. Or, parboil, and then set them whole on the gridiron over a very slow fire, and when thoroughly done serve them with the skins on.

Potatoes Sautés.—Heat some dripping or lard in a frying-pan, and drop in some slices, or broken pieces will do quite as well, of cold boiled potatoes; stir pretty constantly and in about ten minutes they will be browned enough; then drain off the superflous fat, season with pepper and salt, and serve. (*See* POTATO CHIPS, BELOW.)

Fried (Sweet) Potatoes.—Parboil, skin, and cut them into thick slices; fry until tender in butter or drippings. Cold boiled potatoes may be sliced and fried in the same manner.

Lyonnaise Potatoes.—Slice cold boiled potatoes and fry them brown, adding pepper, salt, a little grated onion, and parsley chopped fine.

Mashed Potatoes.—To two pounds of hot potatoes rubbed through the colander, add a gill of hot milk, three ounces of butter, and salt to the taste; beat it until light. Serve as a dish or a garnish. If wished, it may be browned in the dish in which it is to be served.

Pastry of Potatoes.—See under *Pies*.

Potato-Balls.—Mash some boiled potatoes to a smooth paste with a little cream (or butter and milk) and a little salt; then form them into flat cakes a half-inch thick, and either bake or fry them brown.

A very ornamental and excellent dish can be made by preparing the potato as above, and then forming it into balls the size of a peach and indented like one, or into the shape of a pear; warm through and brown slightly on one side in a quick oven. The pears should be served on a napkin with the broad end downward, and a bit of stalk stuck in the other end; or they may be served in a well thickened brown gravy poured around, but not over them.

Potato-Chips.—Wash and peel some raw potatoes, and slice them *very* thin on the potato cutter; put them, in a single layer, over the surface of deep hot lard; turn with a skimmer, and as soon as they are a light brown place them on a folded brown paper in the mouth of the oven; continue in this way until all are cooked.

Potato-Fritters.—Boil two large potatoes, and mash them well; beat the yolks of four eggs and the whites of three, and add them to the potato, with a tablespoonful of cream, another of sweet wine, a squeeze of lemon-juice, and a little nutmeg. Beat this half an hour; it will then be very light. Put a good quantity of lard into a frying-pan, and drop a spoonful of the batter at a time into it; fry them, and serve with a sauce composed of one wineglassful of white wine, the juice of a lemon, one dessertspoonful of peach-leaf or almond water, and some white sugar warmed together.

Roast Potatoes.—Boil till about half done, take off the skin, and roast them in the oven to a light brown. *Or*, put them with the peel on in the ashes of a wood fire. This latter is an excellent method.

Roast (Sweet) Potatoes.—Select them about the same size, wash, wipe dry, and roast until they yield readily to pressure. *Or*, roast in the ashes as directed for Irish potatoes. The latter is the better way.

Scooped Potatoes.—Wash and wipe some large potatoes of a firm kind, and with a small scoop form as many diminutive ones as will fill a dish; cover them with cold water, and when they have boiled very gently for five minutes pour it off, and put more cold water to them; after they have simmered a second time for five minutes, drain the water quite away, place the cover of the sauce-pan so as to leave an inch or more of open space for the moisture to evaporate, and let them steam by the side of the fire from four to five minutes longer. Dish them carefully, pour white sauce over them, and serve them in the second course. Old potatoes thus prepared, have often been made to pass for *new* ones, at the best tables, at the season in which the fresh vegetable was dearest. The time required to boil them will of course vary with their quality.

Potato Scoop.

Stewed Potatoes. — Pare the potatoes, quarter them, and soak in cold water for half an hour; put into a stew-pan, with enough cold salted water to cover them, and stew until ready to crumble to pieces; then drain off half the water, and add a teacupful of milk; boil three minutes, stirring pretty constantly, and add a tablespoonful of butter, and a little salt and pepper; thicken slightly with flour, boil up once, and serve hot in a covered dish.

Stuffed Potatoes.—Bake some large mealy potatoes, without skinning them. Cut a slice carefully off the top of each, and take out the insides without breaking the skin; mash the potato to a smooth paste, and flavor with cream or milk, or butter, and salt; return this mixture to the shells again, replace the piece cut off the top, and roast before the fire for a few minutes before serving. Serve on a napkin.

POT-AU-FEU.—The following is M. Soyer's receipt for this famous French dish: Put six pounds of beef into a pot containing four quarts of water, set it near the fire and skim; when nearly boiling add a teaspoonful and a half of salt, half a pound of liver, two carrots, four turnips, eight young or two old leeks, one head of celery, two onions (one of them burnt), with a clove stuck in each, and a piece of parsnip. Skim again, and simmer *four or five hours*, adding a little cold water now and then; skim off part of the fat, put slices of bread into a soup-tureen, lay half the vegetables over them, and pour in half the broth; serve the meat separately with the other half of the vegetables.

POTTERY. (*See* EARTHENWARE.)

POULTICES. When poultices are ordered

by the physician, it is of the utmost importance that they should be well made and properly applied; and before being put on the skin they should be smeared with sweet-oil or glycerine, to prevent any particle sticking. For bread and linseed poultices—the ones most often applied—no better authority need be wanted than the celebrated Dr. Abernethy. The *bread-and-water poultice* he directs to be made as follows: "Put half a pint of hot water into a bowl; add to this as much of the crumbs of bread as the water will cover; then place a plate over the bowl and let it remain ten minutes; stir the bread about in the water, or, if necessary, chop it a little with the edge of the knife, and draw off the water by holding the knife at the top of the bowl, but do not press the bread, as is usually done; then take it out lightly, spread it about one-third of an inch thick on some soft linen, and lay it upon the part." *Linseed-meal poultices*, says the same authority, should be made as follows: "Scald your bowl by pouring a little hot water into it, then put a small quantity of finely-ground linseed-meal into the bowl, pour a little hot water on it, and stir it around briskly until you have thoroughly incorporated them; add a little more meal and a little more water, and then stir again. Do not let any lumps remain in the bowl, but stir the poultice well, and do not be sparing of your trouble. If properly made, it is so well worked together that you might throw it up to the ceiling, and it would come down again without falling to pieces; it is in fact like a pancake. What you do next is to take as much of it out of the bowl as you may require, and lay it on a piece of soft linen; let it be about a quarter of an inch thick, and so wide that it may cover the whole of the inflamed part."

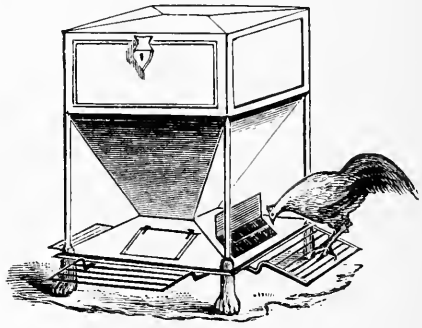
Bran Poultice.—This is often used as a fomentation. A linen or flannel bag should be made of the size required, and loosely filled with bran; then boiling water should be poured upon it till it is thoroughly moist; next it is to be wrung out in a coarse towel, and applied as directed.

Yeast Poultice.—This is made by taking one pound of flour, and one ounce of yeast, boiling together, and spreading on linen. (*See* HOT-WATER BAG and SPONGE POULTICE.)

POULTRY-KEEPING. — When properly managed, poultry are a source of considerable profit, yielding, when kept in small flocks, more for the food they consume than any other domestic animals, except the hog, although their value is not always fully appreciated. Full directions for selecting and preparing the different varieties of poultry for the table are given under the proper heads; here we propose to indicate the more important rules to be observed in raising poultry, beginning with

Chickens.—These are the most profitable and most generally useful of the entire feathered tribe. The hen is peculiarly an egg-producing bird; she has the same predisposition for laying that the cow has for secreting milk. Some breeds are better layers than others; but with proper food and favorable conditions all will produce a reasonable quantity of eggs.

The *food* of chickens may consist of the different kinds of grain, either broken, ground, or cooked; roots, and especially boiled potatoes are nutritious and economical; and all kinds of green vegetables, such as cabbage, lettuce, chickweed, most of the grasses, clover, etc., are eagerly eaten by them. Though not absolutely essential to them, yet nothing contributes so much to their laying as unsalted animal food. This is a natural aliment, as is shown by the avidity with which they pounce on every fly, insect, or earth-worm which comes within their reach. It would not, of course, pay to supply them with valuable flesh, but the blood and offal of the slaughter-house, refuse meat of all kinds, and especially the scraps or cruddings to be obtained at the melters' shops, after soaking for a few hours in warm water, are the most economical of foods; mixed with boiled meal, the last is extremely fattening. Grain is better for them when cooked; they will lay more, fatten quicker, and eat less, when it is fed to them in this state. All the grains are good for them, including millet, rice, and the oleaginous seeds, as the sun-flower, flax, etc. It is always better to afford them a variety of grains which they can procure at option, and select as their appetite craves. They are also fond of milk, especially when it has become curdled; and indeed scarcely anything edible escapes their notice. It is better to give them their food warm (not hot), and there should always be a plentiful supply before them to prevent gorging. The accompanying cut rep-



Food Fountain.

resents a "food fountain," which is very useful. The grain is placed in the hopper, which is closely covered, and the grain falls into the bottom below. It is accessible on four sides by spring doors, which are thrown open by the weight of the fowl on the connecting spring. One is shown as opened by the fowl in stepping up to feed. This is a protection against dirt and vermin. Besides their food, chickens ought to be at all times plentifully supplied with clean water; also with egg-shells, or pounded oyster-shells, old mortar, or slaked

lime. If not allowed to run at large, where they can help themselves, they must also be furnished with gravel to assist their digestion; and a box or bed of ashes, sand, and dust, is equally essential to roll in for the purpose of ridding themselves of vermin.

The *hen-house* should be perfectly dry throughout, properly lighted, and capable of being made warm and tight in winter, while affording complete ventilation, desirable at all seasons. In this arrange the nests in boxes on the sides, in such a manner as to humor the instinct of the hen for concealment when she resorts to them. When desirable to set the hen, these nests may be so placed as to shut out the others, yet open into another yard or beyond the enclosure, so that they can take an occasional stroll and help themselves to food, &c. This prevents other hens laying in their nests, while setting; and it may be easily managed by having their boxes placed on the wall of the building, with a moveable door, made to open on either side at pleasure. Hens will lay equally well without a nest-egg, but when broken up, they ramble off and form new nests, if they are not confined. They will lay if kept from the cock. Hens disposed to set at improper times, should be dismissed from the common yard, so as to be out of reach of the nests, and plentifully fed till weaned from this inclination. Young chickens require to be kept warm and dry for a few days after hatching, and they may be fed with hard-boiled eggs, crumbs of bread or pudding, and milk or water, and allowed to scratch in the gravel in front of the hen, which should be confined in a coop for the first three or four weeks.

The *diseases* of chickens are not numerous nor complicated, and may be avoided by proper treatment and food, and by being kept from wet grass or damp ground, such as are indicated in the foregoing observations. *Gapes* or *pip* is generally caused by drinking unwholesome or dirty water. A feather dipped in coal oil or a mild solution of carbolic acid, thrust down the throat, twisted and withdrawn, is a good remedy. Or compel the bird to swallow a large lump of fresh butter mixed with Scotch snuff. After an attack, feed for a few days with light food, such as soaked bran and cabbage, or lettuce chopped fine.

Roup, which is the most fatal of fowl diseases, springs from dirty, badly kept chicken-houses, and generally attacks ill-conditioned fowls. It resembles glanders in the horse, is very contagious, attacking all barndoor fowls; with geese and ducks is called "Gargle." The best cure is prevention, keep the fowls in better order; medicines are generally useless, the best is salt and water as an emetic.

Flux, in fowls generally, takes the form of dysentery, and is best treated by feeding with rice or unground wheat.

Megrim, a very common disease of poultry, brought on by intestinal troubles,—may be recognized by dizziness, turning round, the chicken falling on its back and kicking,—is quite unmistakable. The treatment is to purge gently with castor oil, and keep in a warm place.

Blindness is also a common disease of poultry, generally accompanying "Roup"; is readily cured by dropping a very weak solution of laudanum with water into the eye. Finally, in regard to the diseases of poultry it should be well understood that they arise from ill-kept houses, and require better management either in regard to cleanliness, ventilation or food. Medicines usually do no good, and often do much harm.

Of the many varieties of chickens the *Dorking* is esteemed one of the best, being large, well formed and hardy, good layers and setters, and excellent for the table; they are both white and speckled, and generally have five toes. The *Poland*, a very large breed, from 8 to 10 pounds, is both white and black, with a large tuft, generally of white feathers, on the head; they are of good size, and excellent layers, very large eggs, but are seldom inclined to set, which makes them peculiarly desirable for such as wish eggs only. The *Cochin China*, is admired for its large size, its handsome appearance, and the brightness of its colors; but more especially for its laying qualities, and its gentle disposition. The chickens are exceedingly hardy. A first-class fowl should be large, square, and compact; full in the chest; deep in the keel, and broad across the loins and hind quarters. The head is delicately shaped, the tail short and horizontal, and legs very short, yellow, and heavily feathered. The *Brahmapootra* is a remarkably useful and hardy fowl, laying large eggs, foraging well when at liberty, and good setters and mothers. The chickens fledge early, grow fast, and are very hardy. These birds when full-grown weigh from ten to twelve pounds each. The chief objection is their tendency to roam, as they are not satisfied unless they have some acres of land to wander over; but when thus gratified they will find food for themselves, and live on much less than the Cochins, which, though great eaters, must have all their food provided for them. The *Dominique* is a speckled fowl, of barely medium size, compact, good layers, and valuable for the table. The *Bantam* is but little larger than a pigeon, and is usually pure white, but sometimes speckled; it is very domestic, and a pleasant little bird around the premises, and is not unprofitable. It is generally feathered to the toes, but may be bred with clean legs. Should not weigh over one pound. The *Game fowl* is of medium weight, and yields good flesh, but is a poor layer, very quarrelsome (altogether the best fowl to keep for market), and undesirable to have where there are other fowls. Besides these there are many fanciful varieties, as the *Creeper*, with excessively short legs; the *Rumpless*, without a tail; the *Frizzled*, with irregular feathers turned toward the head; the *Silky* or *Merino* fowl, with brown or buff down instead of feathers; the *Negro*, with black crest, wattles, legs, and feathers; several varieties of the *Top-knot*, and others.

As a rule in the management of fowls, keep the dark ones for laying, and fatten the light ones for the table.

Ducks.—The common or tame duck, as it is sometimes called, appears to be a domesticated variety of the mallard or wild-duck, but with one important difference, consisting in the practice of polygamy instead of the invariable pairing which is the habit of the wild duck. Ducks require water much more than geese; and they do not graze, but are hearty feeders, devouring any thing that comes to hand, whether green vegetables, or meal, or potatoes, or meat—either raw or dressed—or, again, worms, slugs, and the larvæ of insects. A drake should be allowed four or five ducks; sometimes, however, six or seven will not be found too many. The female lays for more than three months, sometimes even producing as many as eighty eggs. The average, however, is not more than half this number. She will cover about twelve or fourteen, and is generally a steady sitter. Plenty of straw should be allowed her, as she always covers her eggs up when she leaves them, and she is often away an hour at a time, when the eggs are liable to be chilled if not well protected. The eggs are hatched at the end of a month, and the ducklings should be kept from the water for the first week or ten days. They are easily reared on barley-meal and potatoes, with a little boiled cabbage added occasionally.

The varieties of ducks are almost innumerable; but the principal ones are the *white Aylesbury*, and the *Rouen*, with various crosses of these. The Aylesbury should be large, with a perfectly white plumage, yellow feet, and a flesh-colored bill. The Rouen is a large dark-colored variety, resembling the wild duck in all respects but size. But the most profitable for domestic use is the *common black duck*, which is a prolific layer.

Geese.—The common goose is undoubtedly a descendant of the wild grey-lag, though it has by long domestication lost the power of sustained flight so well marked in that bird. Like it, however, it is gregarious; and when many flocks are kept together they separate at night as regularly as different families of children coming home from school. The domestic goose is too well known to need description. One gander is required to three or four geese, which, in mild seasons, lay early and sit well. They require a warm, dry place for their nests, and when undisturbed, they will sit steadily; and if the eggs have not been previously chilled or addled, they will generally hatch them all, if kept on the nest. To insure this, it is sometimes necessary to withdraw the first hatched, to prevent the old ones wandering before all are out. The young should be kept in a warm sheltered place till two or three weeks old, if the weather be cold or unsettled. The best food for the goslings, is barley or oat, or boiled Indian meal and bread. Milk is also good for them. They require green food, and are fond of lettuce, young clover, and fresh tender grass; and after a few weeks, if they have a free range on this, they will forage for themselves. Geese are not profitable birds to raise, unless in places where they can procure their own subsistence, or at least during the greater part of the year. This they are enabled to do wherever there are extensive commons of unpastured lands, or where there are streams or ponds, lakes or marshes with shoal, sedgy banks. In these they will live and fatten throughout the year, if unobstructed by ice. They may be fed on all kinds of grain and edible roots, but it is more economical to give them their food cooked. The well-fattened gosling affords one of the most savory dishes for the table. Geese live to a great age; they have been known to exceed 100 years. If allowed a free range on good food and clean water, they will seldom get diseased. When well fed, they yield nearly a pound of good feathers in a season, at three or four pluckings; and the largest varieties even exceed this quantity.

There are many varieties of the goose; but the *common white* and *gray* are the best. The white *Bremen* is much larger, often weighing 20 pounds net; it is of a beautiful snowy plumage, but it is not as prolific and hardy as the former. The *China goose* is small, but one of the most beautiful of the family, possessing much of the gracefulness of the swan; it is prolific and tolerably hardy. The *Guinea* or *African goose* is the largest of the species, and equals the swan in size, often weighing over 25 pounds when ready for the table.

Guinea Fowls.—The guinea-fowl is a native of Africa and the southern part of Asia, where it abounds in a wild state. Most of them are uniformly speckled; but occasionally they are white on the breast, like the Pintados of the West Indies, and some are entirely white. They are very noisy, and so pugnacious that it is nearly impossible to keep them along with the poultry. They are of a roving disposition, and will not thrive except in rural districts. The hen must be closely watched when about to make her nest, which she does in the month of May. They mate in pairs, and the period of incubation is 26 days. When allowed to range at liberty over arable land, they require very little feeding, and hence they are kept by many people; but their habits are so wild, that they give an immense amount of trouble. From the great mass of feathers, the guinea-fowl looks larger than it is, as when plucked its size is not greater than that of a common fowl.

Pea-Fowls.—The pea-fowl is an ornamental bird only, and though good for the table, yet its habits are so rambling and it eats so much food, that it can scarcely be kept for the sake of its produce. The management is the same as for the turkey.

Pigeons.—These are kept sometimes in the poultry yard, but unless they are allowed full liberty to fly at large, and pick up part of their living on arable land, they are not profitable birds. Their varieties are so numerous as to require a handbook to themselves, if fully des-

cribed; but for economical purposes, any of the common sorts will be found to answer better than the fancy pigeons.

Turkey.—The turkey is a native of America, and is found wild at the present day nearly all over the temperate parts of the continent, where it is irregularly migratory and gregarious, and forms a most valuable article of food. The domesticated turkey is very hardy, and braves our winters with impunity, preferring even the imperfect shelter of any convenient tree, to any indoor lodgings. But in severe frost they are not to be left out with impunity, as their legs and feet are liable to become frost-bitten; they should therefore be compelled to enter some outhouse at such times. Turkeys are very fond of roaming, and will not long thrive without being allowed to wander over farm-land, where they pick and greedily devour insects of all kinds, as well as the tender heads of turnips, etc. The flesh of the turkey, both wild and domesticated, is exceedingly delicate and palatable; and though the former does not possess the high game-flavor of the smaller wild-fowl, it exceeds them in digestibility and healthfulness. The turkey is useful chiefly for its flesh, as they seldom lay more than a nestful of eggs in one season, when they brood on these and bring up their young. If full-fed, however, and their first eggs are withdrawn from them, they frequently lay a second time.

In choosing turkeys for breeding, the cock should be selected with a broad breast, clean legs, wings and tail ample and well-proportioned, eyes bright, and the carniculated skin of the head and neck should be fully developed and changeable in color. The young cock is sufficiently mature for breeding purposes at a year old; but he does not arrive at perfection till three years old, and lasts till he is double that age. The hens should be plump, lively, with plumage similar to that of the cock with which they are to be mated, so as to avoid any mixing of colors. One vigorous cock will suffice for a flock of ten or twelve hens. The laying generally commences in March, and is indicated by the hen assuming a degree of importance and restlessness which is new to her. She should now be closely watched, otherwise she is very likely to "steal her nest," as the act of laying in an out-of-the-way place is called. To avoid this, a nest of straw, lined with dry leaves, should be made in some quiet out-house, and the hen confined there every morning until she has deposited her first egg. The turkey is a good sitter, and will sometimes lay one or two eggs after she has begun to sit; these should be removed, as they will not hatch at the right time. Scarcely anything will induce her to leave her nest, and she must have food and water placed within her reach. From the 26th to the 31st day the hatch takes place, and the chicks should be carefully removed, by a person to whom the old bird is accustomed, as fast as they are hatched, and kept in a warm basket till all have made their appearance. The young may be allowed to remain twenty-four hours without food, but should then be fed with hard-boiled eggs, cut fine, or with crumbs of wheat bread. Boiled milk, curds, and buttermilk afford an excellent food. As they get stronger, oat or barley meal is suitable, but Indian meal, uncooked, is hurtful to them while quite young. They are very tender, and will bear neither cold nor wet; and it is of course necessary to confine the old one for the first few weeks.

POWER OF ATTORNEY.—A power of attorney, or letter of attorney, as it is sometimes called, is an instrument in writing, under seal, whereby one person authorizes another, called the attorney, to do some act in his stead. It may be in the following form:

KNOW ALL MEN BY THESE PRESENTS:—That I, John Doe, of the City, County and State of New York, have made, constituted and appointed, and by these Presents do make, constitute and appoint Richard Roe, of said New York, my true and lawful attorney for me, and in my name, place and stead, to (*here insert a particular description of the business which the attorney is to transact*), giving and granting unto my said attorney full power and authority to do and to perform all and every act and thing whatsoever, requisite and necessary to be done in and about the premises, as fully to all intents and purposes, as I might or could do if personally present, with full power of substitution and revocation, hereby ratifying and confirming all that my said attorney or his substitute shall lawfully do or cause to be done by virtue hereof. In witness whereof, I have hereunto set my hand and seal the first day of May, in the year one thousand, eight hundred and seventy six.

Sealed and delivered in presence of
ANDREW HARKING,
RICHARD WRIGHT.

JOHN DOE. [L. S.]

The attorney may be authorized to transact all the business of his principal, in which case he has a general authority; or to do some particular act in behalf of his principal, as to sell stock, in which case he has only a special authority. Important legal consequences depend upon this distinction.

The act of the attorney will bind the principal, provided it is within the scope of the authority conferred upon him; and if the attorney in such case names his principal upon entering into contracts with third persons, he will not be personally bound thereby. But if an attorney assume to act for another without authority, or if he exceeds the authority conferred upon him, he is personally liable to the person with whom he is dealing, although he may have been innocently mistaken as to the extent of the authority delegated.

It is the duty of the attorney to observe the strictest good faith in his dealings for and in behalf of his principal. To observe faithfully the instructions received; to render just and

true accounts; not to mix the property of his principal with his own; to notify his principal of acts done in his employment, and he is not allowed to retain for his own use any profit he may have made in the course of the business upon which he may have been employed.

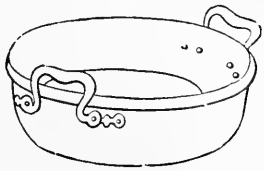
Any one personally competent to do an act may authorize an attorney to do the act in his behalf. Persons under twenty-one years of age, and married women, as a rule, are incapable of appointing an attorney; but they may act as attorneys for others.

An ordinary power of attorney may be revoked at any time by the principal, and his death always operates as a revocation. If, however, it be coupled with an interest in the attorney, as if he be authorized to transfer stock standing in the name of the principal as security for a debt due him from the principal, it is irrevocable.

PRAIRIE CHICKEN.—Called also *heath-hen* and *pinnated grouse*. Somewhat similar to the partridge (ruffled grouse), but is more regularly marked, or barred, on the breast. The tail-feathers are fan-like, but quite short and thick; and the neck has on each side a feathery mane hanging down. They are in season with the partridge (which see), and prepared in the same way.

PRAWNS.—Also called *big shrimps*, though quite differently formed, having a relatively larger head and eyes, with a saw-like beak or crest which bends upwards; also a sharp back (especially near the tail), flat-sided, and the claws quite small. In season from April to November. Most of them are brought from the south already cooked, and sold by the measure. Prepare, cook, and serve like shrimps.

PRESERVES.—By far the best utensil for preserving purposes is the porcelain-lined kettle; but the common bell-metal will answer *if it is kept scrupulously clean*, and scoured with hot vinegar each time it is used. The following general directions for making preserves apply also to jams, jellies and marmalades:



Copper Preserving Pan.

1. Let everything used for the purpose be delicately clean; cans and bottles especially so.

2. It is best not to place a preserving-kettle *flat on the fire*, as this renders the preserves liable to burn to it. In the ordinary kitchen-range what is called a low fire will answer, and in other cases some contrivance (as a trivet) which will lift the bottom of the preserving-kettle an inch or two from the coals should be used.

3. Use granulated sugar for nice preserves; brown or moist sugar will affect both the color and the flavor.

4. After the sugar is added to them stir the preserves gently at first, and more quickly toward the end, without quitting them until they are done; this precaution will prevent the chance of their being spoiled through burning.

5. All preserves should be carefully cleansed from the scum as it rises.

6. Fruit which is to be preserved in syrup must first be blanched or boiled gently, until it is sufficiently softened to absorb the sugar; and a thin syrup must be poured on it at first, or it will shrivel instead of remaining plump, and becoming clear. Thus, if its weight of sugar is to be allowed, and boiled to a syrup with a pint of water to the pound, only half the weight must be taken at first, and this must not be boiled with the water more than fifteen or twenty minutes at the commencement of the process; a part of the remaining sugar must be added every time the syrup is reboiled, unless it should be otherwise directed in the receipt.

7. Never use tin, iron, or pewter spoons, or skimmers, for preserves, as they will convert the color of red fruit into a dingy purple, and impart, besides, a very unpleasant flavor.

8. Let fruit for preserving be gathered always in perfectly dry weather, and be free both from the morning and evening dew, and as much so as possible from dust.

9. Put up preserves in small jars in preference to large, and when made keep them in a dark, cool closet, which is perfectly dry.

Apples.—Select tart and well-flavored apples; peel and remove the cores without dividing them, and then parboil the apples. Make a syrup by adding to the apple-water three-quarters of a pound of sugar to every pound of apples; boil some lemon-peel and juice in the syrup. Put the apples into a preserving-kettle, pour the boiling syrup over them, and let them simmer (not boil, as that breaks the fruit) till they are tender; turn them gently while cooking. Put them into jars, and cover with the boiling syrup.

Apricots.—Choose the fruit carefully, large and sound, and push out the stones at the stalk end with a piece of wood; take equal weights of fruit and sugar, half of the latter in powder to be strewn over the apricots and let remain twenty-four hours. Boil them gently a few minutes, and when cold, repeat the boiling at intervals of four or five hours, till the fruit becomes clear and bright. Then take the apricots out, and having made a thick, clear syrup, boil them in it five minutes; put them in jars, pour on the syrup, and tie over.

If desired, instead of putting them in jars,

the apricots may be placed on wire drainers and put into a slow oven to dry; when they cease to stick to the fingers if touched, they may be put away in boxes, with white paper between each layer.

Barberries.—Pick the largest bunches of barberries, and put them with water to make the syrup into a pan, and boil them until tender; then strain them through a sieve, and to each pint of liquor add one pound and a half of loaf-sugar; boil and skim, and to each pint of the syrup put half a pound of the fruit in bunches, and boil them gently till bright. When cold put them in jars, pour the syrup over them, and tie down.

Cherries.—Use French short-stemmed, or Morellas; stone them and to every pound of fruit allow a pound of granulated sugar. Heat the cherries slowly and stew them half an hour in their own juice, then add the sugar and stew gently until clear, pour them boiling hot into cans taken from hot water and screw down the covers.

Crab-apples.—To seven pounds of fruit allow seven pounds of granulated sugar and one quart of hot water. Put the sugar and water in the preserving kettle and leave it over boiling water to dissolve while the fruit is being prepared. Rub the crab-apples clean, prick them well with a coarse needle, nip off the remains of the flower, but do not disturb the stem; place the syrup where it will boil, skim it well, then add the fruit and boil gently until it is so tender that a straw will reach the core. Put it, boiling hot, in cans taken from hot water and screw down the covers at once. A can need not be heated if a silver fork is first placed in it and allowed to remain until the can is filled; it must be immediately withdrawn, a spoonful of the boiling syrup added and the cover at once made fast.

Cucumbers.—Pare twenty large and green cucumbers, cut them into pieces, taking out the soft part, and put them into a jar, with salt and water, and set them in a warm place, to become yellow. Then wash them, and set them, covered with cabbage-leaves, in a pan of water, on the fire; cover the pan, to keep in the steam, and simmer them till of a fine green color. If requisite, change the water and leaves, and simmer them again. Then take them out, and put them into a sieve to cool, and put them into cold water two days, changing the water four times. Make a syrup of four pounds of loaf-sugar and one quart of water, boiling and skimming it well; add the rinds of four lemons pared thin, with three ounces sliced ginger, and boil all together ten minutes. Remove from the fire, and when cool, put in the cucumbers, and boil them until they are clear. Then put them in glasses or pots, strain the syrup over them, when cool; and tie over.

Damsons.—Pick over the plums carefully, but leave the stems on; allow a pound of sugar to a pound of fruit; put the plums in the preserving kettle; heat slowly; stew until the skins are tender; add the sugar, let the whole simmer for ten minutes, then pour into glass cans and cover instantly.

Figs.—Take ripe figs, with the stems on, and let them stand over night in cold water; then simmer in water enough to cover them, until tender, and spread out upon a sieve to cool. Allow a pound of sugar and a teacupful of cold water for each pound of the fruit; boil them together until the scum stops rising; then put in the figs, and simmer ten minutes. Remove from the fire, lift the figs out with a skimmer and spread them on dishes to cool; add to the syrup the peel of one lemon and the juice of two, and a little ginger (for three pounds of fruit) and boil it thick; put in the figs again, and boil fifteen minutes; fill the jars nearly full, pour in the syrup, and when cold tie up.

Ginger.—Pare green ginger, and throw it into cold water, to keep its color; boil it tender in three waters, at each change putting the ginger into cold water. For each pound of ginger allow one pound of refined sugar; when cold, drain the ginger, put it into the pan with enough of the syrup to cover it, and let it stand for two days; then pour the syrup to the remainder of the sugar, and boil it for some time; when cold, pour it upon the ginger again, and set it by for three days; then boil the syrup again, and pour it hot over the ginger. Proceed thus till you find the ginger rich and tender, and the syrup highly flavored. If you at first pour on the syrup hot, or if it be too rich, the ginger will shrink and not take the sugar.

Preseved ginger is now imported, in large quantities, from China and the West Indies; the best is that sold in small bottles. The cheaper sorts, in jars, with covers, are less delicate.

Gooseberries.—Take full-grown, unripe fruit. Follow the rule for damsons.

Green-gages.—**I.** Prick them all over with a pin, then put them in scalding water, let them simmer a few minutes, and strain them; take their weight in sugar, put it into a preserving-kettle with a quarter of its bulk of water, let it boil well, and skim very clear; put in the plums, let them boil up once, take them off, and set them aside till next day; then take them out one by one from the syrup, boil it, and skim again; put in the plums and let them boil very gently for twenty minutes; take them off as before, and let them stand till cold; then put them into jars and tie up close.

II. Gather the largest gages, free from specks, and just before ripe. Lay in the pan vine-leaves, and then the fruit in layers, with leaves between, and covering them, fill up with water, and set it to get hot on a moderate fire; skim them and put the fruit in a sieve to cool; then peel them and put them again into the water, with fresh leaves, and boil them three minutes, keeping in the steam; set them at a moderate distance from the fire, six or seven hours, until they become green; then put them in a sieve to drain, and boil them up

in a clear syrup once a day for three successive days. Take the gages out, put them in glasses or jars, pour over them the syrup when nearly cold; and tie down.

Groseilles.—Cut the stalks and tops from a gallon or more of ripe gooseberries, put them into a large preserving-kettle, and boil them for ten minutes in enough water to cover them, stirring often with a wooden spoon; then pass both the juice and pulp through a fine sieve, and to every three pounds weight of these add half a pint of raspberry juice, and boil the whole briskly for three-quarters of an hour; draw the kettle aside, and stir in two pounds of sugar; when it has dissolved, renew the boiling for fifteen minutes longer.

Melon (Citron).—Remove the soft pulp; cut according to fancy; pare smoothly and boil until tender, with an ounce of alum to four quarts of water. Allow a pound of sugar and two fresh lemons to every pound of melon. Cut the lemon rind in thin strips or in leaves and boil until tender. Make the syrup, allowing half a pint of water and the juice of the lemons to a pound of sugar. When boiling and well skimmed add the melon and the rind of the lemon; cook until clear. Put it boiling-hot into air-tight cans. (*See* WATER-MELON.)

Mixed.—**I.** Take two pounds of clear red gooseberry juice and boil it for three-quarters of an hour; add one pound of very ripe green-gages, weighed after they have been pared and stoned; then stir to them a pound and a half of sugar, and boil again for twenty minutes. If the quantity be much increased, the time of boiling must be so likewise; this had better be done before the sugar is added.

II. Take raspberries, red currants, and white currants, in any proportion that may be convenient, or gooseberries and black currants in equal quantities; heat them together carefully, and stew them slowly for twenty minutes or half an hour, according to their weight; then for each pound of fruit add three quarters of a pound of common moist sugar, dried and heated before the fire; boil five minutes longer, and then put in jars.

Oranges.—Put the oranges into water and boil till a straw will penetrate the rind easily; allow three-quarters of a pound of sugar and not quite half a pint of water for each pound of fruit, and make a syrup of them; take the oranges from the water in which they were boiled, pour the hot syrup over them, and let them stand in it till next day; then boil them in the syrup till it is thick and clear; put them in jars, and strain the syrup over them.

Orange-peel.—Allow a pound of sugar for a pound of fruit; peel the oranges carefully, and cut the peel into narrow strips; boil it till tender, changing the water twice, adding hot water each time; squeeze the oranges thoroughly, strain the juice, and add it to the sugar, which put on to boil; when it is heated to the boiling-point, put in the peel and boil twenty minutes; put into jars and pour the syrup over it.

Preserve lemon-peel in the same way, allowing a pound and a quarter of sugar to a pound of fruit.

Peaches.—**I.** Pare carefully large white Clingstones and remove the stones; boil till tender in a thin syrup made of one-third of a pound of sugar to a pound of fruit; put them in a bowl, pour the syrup over them, and let them stand two days in a cool, dry place; then make a rich syrup, allowing three-quarters of a pound of sugar to a pound of the fruit; drain the peaches from the first syrup, put them into the rich syrup, and boil them until they are clear. Fill the jars about three-quarters full of the peaches and fill up with the syrup.

II. Select the largest and freshest fruit; not too ripe; rub off the down with a piece of old linen, and divide the skin at the seam with a penknife. Put them into a jar of French brandy and tie them down for eight or nine days, then take out the fruit and boil it in a fine clear syrup until very bright, when put it into glasses, pour the syrup over it, and cover closely.

Pears.—Allow three-quarters of a pound of sugar to a pound of firm, ripe fruit; halve it and avoid the stem, core, pare and boil in clear water until tender; drop the fruit into a rich boiling syrup made with the sugar and a little of the water in which the pears were boiled; when clear, put the fruit in glass cans, leaving them in boiling water while the syrup boils, until thickened; then fill the cans and cover at once.

Pine-apples.—**I.** Select those that are ripe and perfectly fresh; pare and cut, shred from the core with a silver fork, in large or small pieces to suit the taste; allow a pound of granulated sugar to every pound of fruit; heat the pine-apple slowly and let it stew in its own juice until perfectly tender; add the sugar and let it simmer five minutes; put the fruit in glass cans, and leave them in boiling water while the syrup is thickened by rapid boiling; drain the thin syrup from the cans, fill them with the thick boiling syrup, and close at once.

II. After paring off all the rind, *grate* the pine-apples; allow a pound of sugar to a pound of the pulp; and boil together gently for half an hour. This is excellent.

Pine-apples fresh for Christmas.—Select large, fresh and ripe pine-apples, pare them carefully, removing every eye; shred from the core with a silver fork; allow a pound and a quarter of granulated sugar to every pound of fruit; put them in layers in a large bowl, stirring occasionally to dissolve the sugar; then put it in glass cans, and screw down the covers as tightly as possible.

Plums (Egg).—Pour boiling water on them, let them stand five minutes, and then peel them so carefully as not to break the fruit; make a syrup with a pound of sugar and not quite half a pint of water to a pound of fruit; boil the plums in it till clear and tender, then remove them and lay them on a dish to cool; when cool put them in jars, pour the hot syrup over them, and tie up closely.

Plums, (Purple).—Make a rich syrup, allow-

ing a pound of sugar and not quite half a pint of water to a pound of the plums; boil the plums in it slowly until the skins begin to crack; put them into jars, and pour the syrup over them. In three days boil a second time gently, and then tie them up.

Plums (*White or Green*).—Preserve as directed for egg plums. Or they can be preserved with the skins on by pricking them.

Prunes.—Pour enough boiling water on them to cover them, add a lemon cut in small pieces, and set them where they will keep hot; when swelled out to nearly the original size, put to each pound of the prunes half a pound of brown sugar, and a stick of cinnamon, or a teaspoonful of ground cloves; if there is not enough water to cover the prunes, etc., add more, and stew them in the syrup a quarter of an hour. Add, when taken from the fire, a wineglassful of wine to every three pounds of the prunes, and put them into jars.

Quinces.—I. Peel them, carefully taking out the parts that are knotty and defective; cut them into quarters, or into round slices; put them into a preserving-pan, and cover them with the parings and a little water; cover them, and boil them till tender. Take out the quinces and strain the liquor through a bag. To every pint of liquor allow a pound of loaf sugar; boil the juice and sugar together, about ten minutes, skimming it well; then put in the quinces, and boil them gently twenty minutes. When the sugar seems to have completely penetrated them, take them out, put them into jars, pour the boiling syrup over them and cover immediately.

II. (*Whole.*)—Wash the quinces and steam them until they can be pierced to the core with a straw; when cold, core and pare them as smoothly as possible. To every pound of fruit allow a pound of granulated sugar, made into a syrup with half a pint of boiling water: boil and skim the syrup, lay the fruit in it, cover the kettle and boil for ten minutes; remove the cover and if the fruit is not clear leave it to simmer uncovered until it becomes so. Put it hot in jars and cover immediately with bladder. It is a great inconvenience that none of the glass fruit cans are made large enough to admit whole quinces, large pears or peaches. Paper dipped in the white of egg makes an air-tight covering, but it is very frail.

Strawberries.—Take equal weights of the fruit and loaf-sugar; lay the strawberries in a large dish, and sprinkle half the sugar, in fine powder, over; shake the dish, that the sugar may touch the under side of the fruit. Next day make a thin syrup of the remainder of the sugar, using instead of water, one pint of red currant-juice to every pound of strawberries; in this simmer them until sufficiently jellied.

Or, put the fruit and sugar together into a preserving kettle; set it over a slow fire until the sugar melts, and then boil slowly until rich and clear; take out the fruit with a perforated skimmer and put it into jars, filling them about three-quarters full; boil the syrup five minutes longer, pour it scalding hot on the fruit, and seal up at once.

Tomatoes (*Green*).—Take three pounds of small green tomatoes, and pour enough cold water on them to cover them; add the juice and rind of two lemons (pare the rind thin so as to get none of the white part), a few peach leaves, and half an ounce of powdered ginger (tied up in bags). Boil the whole together gently for ¾ of an hour, strain the liquor, and put to it a pound and a half of white sugar to a pound of the tomatoes—four and a half pounds in all; put in the tomatoes and boil gently till the syrup appears to have penetrated them. In the course of a week turn the syrup from them, heat it scalding hot, and turn it on the tomatoes. Tomatoes preserved in this manner resemble West India sweetmeats.

Tomatoes (*Ripe*).— Procure three pounds of round yellow tomatoes, and peel them: add three pounds of sugar, and let them stand together till next day: then drain off the syrup, boil it till the scum ceases to rise, put in the tomatoes and boil them slowly twenty minutes; take them out with a perforated skimmer, and lay them on a dish; boil the syrup until it thickens, adding at the same minute the juice of a large lemon; put the tomatoes into jars, and pour the hot syrup over them. Cover at once.

Watermelon rind.—This as usually preserved, is not only very troublesome to make, but is insipid to the taste, and far from wholesome; but the following receipt can be recommended:—Take the rind of a melon not quite ripe, and cut it into moderate-sized pieces; pare off the outside "skin," put it into a pan and cover it with salt water for three days, changing the water every day; then put it into clean water for three days, changing the water twice. Then make a thin syrup (a pound of sugar to a pint of water), and boil the melon in it fifteen minutes a day for three days. Next, make a rich syrup (a pound of sugar to not quite half a pint of water), add the juice and rinds (the latter cut into narrow strips and boiled tender) of one or more lemons according to the quantity of melon, and enough of the best white ginger to make the syrup strong of it; boil this till the syrup begins to thicken, and when cold, pour it on the melon. This will keep a long time and be better the second year than the first.

PRIMROSE. — An early flowering plant, closely allied to the Cowslip. There are many varieties, as the white, the red, the yellow-flowered, etc. The *Evening Primrose*, which is the favorite, has odorous yellow flowers, which open in the evening; it grows wild in many parts of the United States, and all the species are very easily cultivated, all that is required being to sow the seeds in any good garden soil early in the spring.

The *Chinese Primrose*, of which there are single and double varieties, with white, red, rosy, lilac, striped, and mottled flowers, is an excellent plant for house culture. Sow the seed in July in a soil composed of one part

peat, and one part sand. Be sure that the pots are well drained, and never keep the plants very wet. By January the plants will bloom, but they must not be allowed to over-bloom, as they are apt to do. After their blooming period is over, and when the weather has become quite warm, set them out of doors, but do not allow them to bloom in the summer. Let them grow till autumn, then repot in soil made as before; and by Christmas they will begin to bloom, affording a succession of flowers till spring.

PRINCESSE DRESS. — This garment, called also the Empire, and the Duchesse dress, is made with waist and skirt of one piece, and resembles the pattern of the basque, with this difference only, that the fronts are cut in three pieces each, and each part cut entirely separate.

Having taken a length of paper sufficient to extend from the neck to the bottom of the skirt, the length to the waist is indicated by drawing a horizontal line, and the rest of the paper folded under. We then design the outlines of a plain waist (*See* WAIST). Next, taking a sixth of the waist measure (VI.)* we lay it along the waist line beginning at the seam under the arm, and mark the other end. Then take half of this, or $\frac{1}{12}$ of the entire waist measure and lay it upon the waist line, beginning at the front, and mark the point where it ends. We then draw a vertical line from the middle of the shoulder seam to the point first marked on the waist line; and from the point last marked on the waist line, a curving line, similar to the front outline of a dart, to meet the vertical line about midway of its height. We then cut, following these lines, and thus divide the front into two pieces, cutting away a space equivalent to what in the plain waist is taken up for darts, and the same rule that determines the height of darts for persons of stouter figure than the average, decides here whether the curved line shall meet the vertical midway of the latter, or a little lower than that. The portion of the waist towards the arm is now cu into two, as shown in Fig. 1, for the purpose of obtaining sufficient fullness in the skirt.

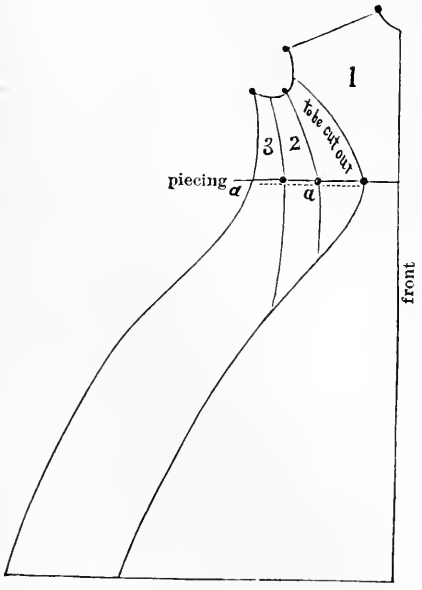


Fig. 1.

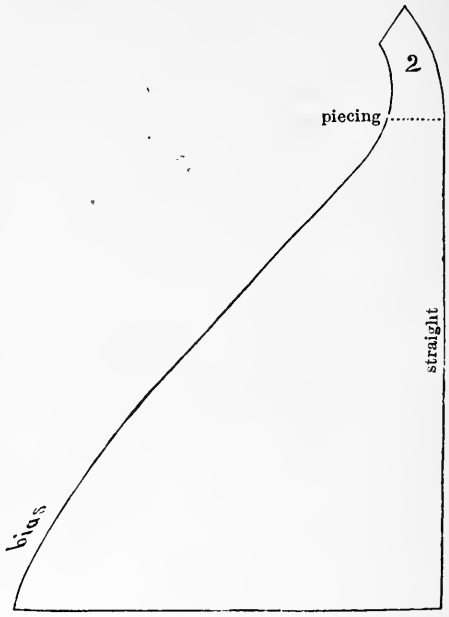


Fig. 2.

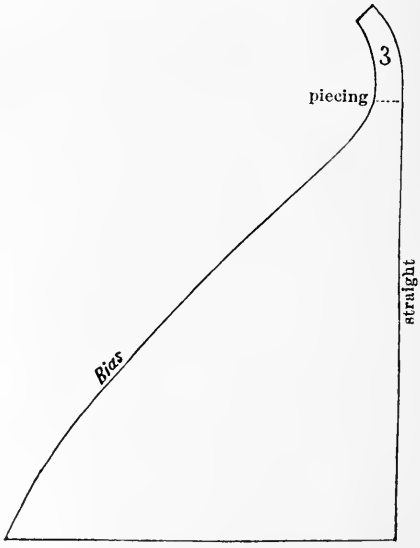


Fig. 3.

*See CUTTING AND FITTING.

Upon the paper, when unfolded, we are able only to draw the first part, 1, of the garment in full. The pattern requires to be pieced at the dotted line *a a*, for the second and third part. That the size and shape of these two parts may be perfectly clear we give the pattern of each in full after being pieced. Figs. 2, 3.

In cutting the back, we proceed as for a basque; frequently, however, we cut the middle of the back in two pieces as shown in figure 4, so that the skirt can be cut with a bias seam in the

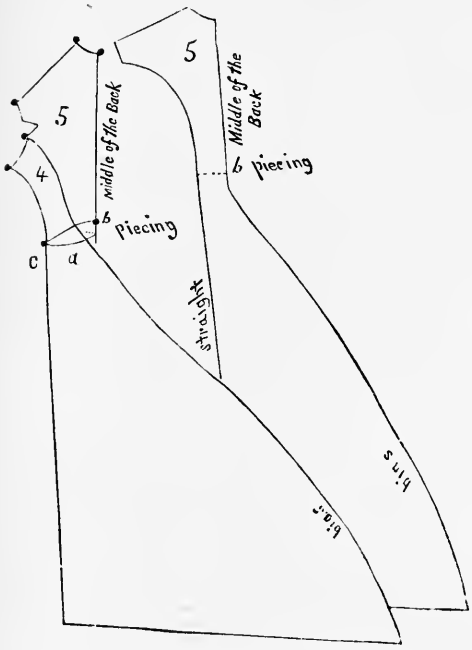


Fig. 4.

middle, which gives it a more graceful sweep. By widening the piece added at the waist, extra

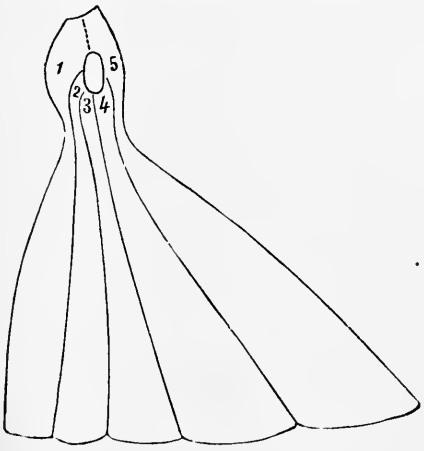


Fig. 5

fullness can be obtained which may be laid over in a large, double plait, also a very graceful effect; and for the Watteau plait, sometimes so much in favor, it is only necessary to widen the back from the neck and lay the material over in a large fold.

In cutting the dress we allow a lining only for the waist and a few inches below. The various parts are put together in the same way as those composing the basque (see WAIST), and in the order represented in Fig. 5.

This pattern may be used for a dressing-gown or wrapper: in which case it requires to be made looser in the waist, all the other measures remaining the same.

PRIVET.—The Privet or Prim is one of the most desirable of the garden-shrubs; its foliage is attractive, and its small clusters of white flowers add much to its beauty. It will thrive in any good garden-soil, and when once planted requires but little attention, blooming for years in the same spot. Its foliage and flowers, however, will be more luxuriant if it is treated to a few shovelfuls of compost yearly. If this compost be given in the autumn it acts as a protection from the frost, and can be dug in around the roots early in the spring. It is better to plant shrubs in the autumn rather than in the spring; but if planted in the spring mulch some stable-litter around the roots or a few inches of hay. This will keep them from drying up during the heat of summer.

PROMISSORY NOTE.—A promissory note is defined to be a written promise, by one person to another, for the payment of money at a specified time, absolutely and at all events.

The following is a common form:

"$525 $\frac{50}{100}$ NEW YORK, May 1, 1876.
"Sixty days after date, for value received, I "promise to pay John Doe, or order, five "hundred and twenty-five $\frac{50}{100}$ dollars, at "the National Park Bank.
"RICHARD ROE."

The person making the note is called the maker, and the one to whom, or to whose order it is payable, is called the payee.

It is customary to insert the words "value received," although it is unnecessary.

Business men usually make their notes payable at some specified place, as at the bank where they transact their business, or at their store or warehouse.

A promise to pay to the payee or order, as in the above form, or to the payee or bearer, renders a note negotiable. Where payable to order, as in the above form, it is transferred by endorsement (the writing his name upon the back by the payee) and delivery—where payable to bearer, by delivery only. Where a note is payable to order, and the payee endorses it by simply writing his name upon the back of it, it is called a blank endorsement, and the note thereby becomes payable to bearer, and may be afterwards transferred by delivery only. But instead of writing only his name upon the back

of the note, the payee may direct to whose order the note shall be payable by writing the words, "Pay to the order of ——— " over his signature on the back of the note, which is called a special endorsement. The person to whom a note is transferred by endorsement is called the endorsee, and the person transferring, the endorser. Any person in possession of a note, and entitled to receive payment of it, is called the holder.

The endorsee can endorse to a second endorsee, and so on indefinitely.

Days of Grace.—A note payable on a certain day or a certain time after date, is entitled to three days of grace, so called, and becomes due and payable three days after the day specified in the note. If the last of the three days of grace happens to be a Sunday or legal holiday, the note is payable on the day preceding. A note payable on demand is not allowed days of grace, but becomes due and payable on the day demand is made.

Demand and Notice of Non-Payment.—When a note is payable at a bank it must be presented for payment during banking hours—in other cases it should be presented during business hours, or during any time of the day when the person who is to pay may reasonably be expected to be found at his residence or place of business.

If a note due and payable is not paid on presentment, it is incumbent on the holder to give notice of that fact to the endorsers and maker. It is not necessary that the notice should be in writing, although this is usual, nor is any particular form necessary. The party liable must be given a correct description of the note, and notified of its non-payment, and that the holder looks to him to pay it.

The notice of non-payment must be given within a reasonable time, in order to charge the endorser, and this is now considered to be not later than the first post upon the day after the note was due and payable.

Endorsement.—An endorsement is an implied contract that the endorser is the *bona fide* owner, that all names before his, of maker and endorsers, are genuine, that the note shall be duly paid, and if not, that the endorser will, on due presentment and notice of non-payment, pay it himself. When, however, the words "without recourse" are added to the endorsement, the above contract does not arise, and the endorser is not liable. When a note is made or becomes payable to bearer, and is transferred by delivery only, without endorsement, the person transferring does not become liable upon the note.

Overdue Notes.—Where a note is taken *bona-fide* in the regular course of business before it falls due, the holder in a suit upon it can shut out almost every equitable defence; but when taken after it is due, it is subject in the hands of the holder to all the infirmities attaching to it while in the hands of the payee, and before it was negotiated, and the maker may avail himself of any defence (want of consideration, for example), which he might have made in a suit by the payee. In this connection it should be stated that notes payable on demand become overdue after the lapse of a reasonable time, although no demand is made. What is a reasonable time, depends upon the circumstances of each particular case.

Protest.—A protest is defined to be "A notarial act, made for want of payment of a promissory note, or want of acceptance or payment of a bill of exchange, by a notary public, in which it is declared that all parties to such instruments will be held responsible to the holder." Strictly, protest is only required of foreign bills of exchange and is not necessary in case of promissory notes or inland bills. It is now the common practice, however, to protest notes and inland bills, and have the notices of non-payment sent by the notary making the protest. This is a convenient way, as notaries keep a record of the instruments protested and notices sent, which renders it easy to prove demand and notice, if a suit is afterwards brought.

PROUD FLESH.—A term applied to the granulations of a wound or an ulcer when healing by suppuration. Its formation is a perfectly healthy process, being in fact one of the stages of healing, and need excite no apprehension. If it ceases to throw off pus, however, and turns bluish, it is possible that mortification may be indicated, and it is best to consult a physician concerning it with as little delay as possible.

PRUNES.—These are a foreign variety of the plum, dried or preserved. There is a great difference in quality. Those from Turkey are generally the best, but are very seldom seen in our market. The best we are apt to get come from the south of France, and perhaps the very best among them are those known as the Yquem. If they arrive fresh and well preserved, any of them are good; but if they become heated on the passage, they "sweat," and are candied, which gives them a whitish appearance and impairs their quality. The best are put up in glass jars, boxes, and other small packages; those which come in baskets or casks are usually inferior. Prunes are very wholesome, and have the effect of a gentle laxative; on this account they are useful to those who suffer from constipation. They are also used in the preparation of certain dishes. (*See* PRESERVES.) Fresh prunes arrive from December to May.

PRUSSIC ACID—(Technically called *hydrocyanic acid.*)—POISON. *Symptoms:* Reduced respiration, the patient breathing but about once in ten seconds. *Treatment:* Artificial respiration. (*See* DROWNING.)

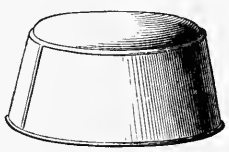
If the dose be of the undiluted acid, death usually occurs so speedily that there is no time for remedies; sometimes ammonia is tried with a view to remove the prostration, but as a rule with small effect. If the dose be of diluted acid, and time permits, send to the druggist's for a dose of hydrated oxide of iron.

This is one of the most virulent poisons known, an almost inappreciable quantity laid on the tongue being sufficient to produce death; but, like most poisons, when employed in very minute quantities, it is a useful medicine. Greatly diluted prussic acid reduces sensibility of the skin, so if there is much pain or itching in the part such an application often does good. In skin diseases, when there is much itching, and *the skin is not broken*, there can be no better application than a very weak solution of prussic acid; for this purpose add half a dram (fluid) to six ounces water. Moderate doses allay irritability of the stomach, and are frequently used in all painful affections of that organ, in ulcers, cancers, and especially in neuralgia. It is also used with advantage in certain chest affections, in whooping-cough, and in functional or other diseases of the heart. It should *never* be used, however, except under medical advice, and then with very great caution.

PUDDINGS.—All the ingredients for puddings should be fresh and of good quality; the slightest degree of mustiness or taint in any one of the articles of which they are composed will spoil all that are combined with it. The perfect sweetness of suet and milk should be especially attended to before they are mixed in a pudding, as nothing is more offensive than the first when it is over-kept, nor worse in its effect than the curdling of the milk, which is the certain result of its being in the slightest degree sour.

Currants should be cleaned, and raisins stoned with exceeding care; almonds and spices very finely pounded, and the rinds of oranges or lemons rasped or grated lightly off (the white part of the skin having no flavor), when they are used for this, or for any other class of dishes; if pared, they should be cut as thin as possible.

Batter is much lighter when boiled in a cloth, and allowed full room to swell, than when confined in a mould; it should be well beaten the instant before it is poured into the cloth and put into the water immediately after it is securely tied. The cloth should be moist and thickly floured, and the pudding should be sent to table as expeditiously as possible after it is done, as it will quickly become heavy. This applies equally to all puddings made with paste, which are rendered uneatable by any delay in serving them after they are ready; they should be opened a little at the top as soon as they are taken from the boiler or stew-pan to permit the escape of the steam from within.



Pudding Mould.

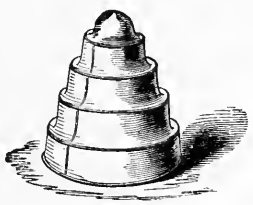
Plum-puddings which it is customary to boil in moulds, are both lighter and less dry when closely tied in stout cloths well buttered and floured, especially when they are made in part with bread; but when this is done care should be taken not to allow them to burn to the bottom of the pan in which they are cooked; and it is a good plan to lay a plate or dish under them, by way of precaution against this mischance; it will not then so much matter whether they be kept floating or not.

A *very* little salt improves all sweet puddings, by taking off the insipidity, and bringing out the full flavor of the other ingredients, but its presence should not be in the slightest degree *perceptible*. When brandy, wine, or lemon-juice is added to them it should be stirred in briskly, and by degrees, quite at last, as it would be likely otherwise to curdle the milk or eggs.

Many persons prefer their puddings steamed; but when this is not done, they should be dropped into plenty of boiling water, and be kept well covered with it until they are ready to serve; and the boiling should never be allowed to cease for an instant, for they soon become heavy if it be interrupted.

Pudding and dumpling cloths should not only be laid into plenty of water as soon as they are taken off, and well washed afterwards, but it is essential to their perfect sweetness that they should be well and quickly dried (in the open air if possible), then folded and kept in a clean drawer.

When a baked pudding is sufficiently browned on the surface (that is, of a fine amber-color all over) before it is baked through, a sheet of writing-paper should be laid over it, but not before it is *set*. When quite firm in the centre it is done.



Baked Pudding Mould.

All puddings which are solid enough to allow of it should be turned on to a hot dish from the one in which they are baked, and strewed with sifted sugar before being served.

Minute directions for the preparation and management of each particular pudding will be found in the recipe for it.

To Mix Batter for Puddings.—Put the flour and salt into a bowl and stir them together; whip the eggs thoroughly, strain them through a fine hair sieve, and add them *very gradually* to the flour; beat it well and lightly with the

back of a wooden spoon, and after the eggs are mixed well, thin the batter with milk to the proper consistence. The whites of the eggs beaten separately to a solid froth, and stirred gently into the mixture the instant before it is tied up for boiling, or put into the baking-oven, will render it remarkably light. When fruit is added to the batter, it must be made thicker than when it is served plain, or it will sink to the bottom of the pudding. Batter should never *stick to the knife* when the pudding is served; it will do this both when a sufficient number of eggs are not mixed with it, and when it is not cooked enough. About four eggs to the half pound of flour will make it firm enough.

Sauces for Puddings.—The following comprise some of the best for sweet puddings:

I. (Brandy Sauce.)—Place on the fire two ounces of sugar and one tablespoonful brandy; stir with a wooden spoon until of a rich, dark brown; then add one half pint of water, six ounces sugar, one thinly pared lemon rind, four cloves, one inch of stick cinnamon, and one teaspoonful cornstarch dissolved in a little cold water; boil fifteen minutes, strain, add one gill of brandy, and serve.

II. (Cream Sauce.)—Heat a pint of cream slowly in a vessel set in a sauce-pan of boiling water; let it just reach the boiling-point, without boiling; remove it from the fire, and add four tablespoonfuls of powdered sugar and the whites of two eggs beaten to a froth; mix well, and flavor with a teaspoonful of nutmeg, and a teaspoonful of vanilla. Set the bowl in hot water till the pudding is served.

III. (German Sauce.)—Boil together one half pint of milk, one half pint of cream, the very thinly pared rind of half a lemon, one inch stick cinnamon, six cloves, one quarter inch vanilla bean, and a teaspoonful of dissolved cornstarch, until the sauce is very strongly flavored. Strain and pour it slowly on the yolks of four eggs well beaten with five ounces of sugar and a pinch of salt. Return it to the fire, placed in a larger stew-pan containing boiling water. Whisk the sauce well until nearly the boiling-point is reached; when it should have the appearance of a thick cream highly frothed, and when about to serve add two tablespoonfuls white rum, and send to table at once.

IV. (Another German Sauce.)—Dissolve in half a pint of sherry or of Madeira, from three to four ounces of fine sugar, but do not allow the wine to boil; stir it hot to the well-beaten yolks of six fresh eggs, and mill the sauce over a gentle fire until it is well thickened and highly frothed; pour it over a plum, or any other kind of sweet boiled pudding, of which it much improves the appearance. Half the quantity will be sufficient for one of moderate size. This is a delicious sauce for any rich pudding.

V. (Hard Sauce.)—Work one and a half teacupfuls of powdered sugar into half a teacupful of butter, and beat them white; add a wineglassful of sherry or any white wine, the juice of half a lemon, and spice to taste. Keep cold.

VI. (Lemon Sauce.)—Beat a heaping teacupful of powdered sugar and half a teacupful of butter to a light cream; add an egg, well beaten, the juice and half the rind (grated) of a lemon, and a teaspoonful of nutmeg, or nutmeg and mace mixed; beat hard for several minutes, and add (a spoonful at a time) three tablespoonfuls of boiling water. Put the bowl into a sauce-pan of boiling water, and heat the sauce very hot, but do not let it boil. Stir constantly.

VII. (Liquid Sauce.)—Boil 1 pint water, 6 oz sugar, ½ oz cornstarch, dissolved in cold water; 2 cloves, a small piece of whole ginger, 1 blade of mace, for 15 minutes. Strain, add prepared cochineal to pink it, 8 drops of essence of bitter almonds, and a glass of brandy.

VIII. (Pineapple Sauce.)—Pare a nice ripe pineapple and *grate* enough of it to make the quantity of sauce required; add a very little water, and simmer it quite tender; then mix with it, by degrees, from half to three quarters of its weight in sugar, give it five minutes more of gentle boiling, and pour it over the pudding.

IX. (Rexford Sauce.)—Dissolve half an ounce of cornstarch in a little cold water, add two gills of boiling water, with eight ounces brown sugar, boil ten minutes; remove from the fire, add two gills of good, strong cider, ½ cup apple sauce, the yolk of an egg, and 2 oz butter.

X. (Vanilla Sauce.)—Put half a pint of milk to heat over boiling water; when scalding hot, add the yolks of two eggs well beaten with half a pint of powdered sugar, and stir until as thick as boiled custard. Set it aside, and when cool flavor highly with extract of vanilla; just before serving whisk the whites to a stiff froth and beat them very gently in the sauce.

XI. (Sherry Wine Sauce.)—Proceed as for brandy sauce, substituting sherry for brandy.

XII. (Port Wine Sauce.)—Proceed as for brandy sauce, substituting port for brandy.

XIII. (Sauce Duchesse.)—Dissolve 2 ozs of finely grated chocolate in 1 wineglass of cognac, then add gradually 1½ pints of cream in which ½ a vanilla bean has been boiled, beat in the yolks of 2 eggs, make scalding hot, strain.

XIV. (Sauce au Quatre Fruits.)—Pare very thinly the rind of 1 lemon, and 1 orange, then strip off every bit of white skin, remove the pips of each, and then cut into small dice. Peel and core 3 apples, and also cut in dice, add a cupful of sultana raisins, and 1 oz of citron cut very small. Make a spice sauce (No. 15), strain, add to the apple as soon as tender, add the rest of the fruit, with ½ of each lemon and orange cut in small strips. Serve hot.

XV. (Spice Sauce.)—Place on the fire 1½ pts water, 10 ozs sugar, 8 cloves, 2 blades mace, 1 nutmeg, 2 inches cinnamon, a small piece of root ginger, and ½ teaspoonful caraway seeds; simmer gently half an hour, strain, and serve.

Albert Pudding, (Boiled.)—*Take:*—Butter, powdered sugar, flour, stoned raisins, each ½ lb; eggs, 5.

Beat the butter and sugar to a cream, and add first the yolks and then the whites of the eggs beaten separately; then strew lightly in the flour, dried and sifted, and last of all the

raisins, weighed after they are stoned. Put these ingredients, perfectly mixed, into a well-buttered mould, or floured cloth; and boil for three hours. Serve it with a rich sauce. A little powdered mace, or the grated rind of a small lemon will vary the flavor of this very excellent pudding: when a mould is used, slices of candied peel should be laid rather thickly over it after it is buttered.

Almond Pudding (Baked).—*Take :*–Bread crumbs, 2 oz; cream, 1 pint: pounded almonds ½ lb: bitter almonds 6; yolks of 7, whites of 3 eggs; sugar, 6 oz; butter, 4 oz: brandy, 1 wineglassful, or ½ glass of noyeau.

Bring the cream to the boiling point, pour it over the bread-crumbs and let them stand till nearly cold: then mix in very gradually the sweet and bitter almonds pounded to the smoothest paste with a little orange-flower water (or a few drops of plain water will answer); stir to them by degrees the yolks and then the whites of the eggs, the sugar (sifted), and the butter; turn the mixture into a very clean stew-pan, and stir it without ceasing over a slow fire until it becomes thick, but on no account allow it to boil. When it is tolerably cold, add the brandy or noyeau, pour the pudding into a dish lined with a very thin puff-paste, and bake it half an hour in a moderate oven.

Apple Pudding (Baked).—*Take :*–Apples, 1 lb; sugar, 6 oz; wine, 1 wineglassful; butter, 3 oz: lemon, juice and rind of 1; eggs, 5; flour, 1 dessertspoonful.

Select good cooking apples, pare and core them and weigh out a pound; stew them to a perfectly smooth marmalade with six ounces of sugar and a wineglassful of wine; stir them often that they may not stick to the pan. Mix with them, while they are still quite hot, the butter, the grated rind and strained juice of a lemon, and lastly, stir in by degrees the well-beaten yolks of the eggs, and a dessertspoonful of flour, or macaroni crushed small. Bake for half an hour in a moderate oven, or longer if the pudding should not be quite firm in the middle. Send to table with sugar sifted over the top.

Apple Pudding, (*Dumpling*).—I. In one quart of flour sifted with five even teaspoonfuls of baking powder, rub two ounces of butter and a pinch of salt; mix with three gills of milk and roll it into a sheet half an inch thick; pile the centre with sour apples, pared, quartered, and cored; lap the crust over them, pressing in the edges; turn it upside down on a plate; put it in the steamer and leave it over boiling water for one hour. Eaten with sugar and cream, or plain butter and brown sugar.

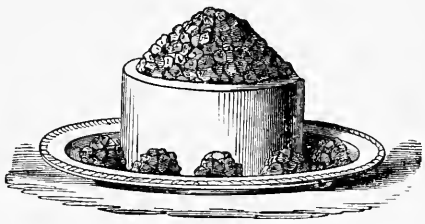
II.—*Take:*–Apples, pared, cored, and sliced, 1½ lbs; flour, 1 lb; suet, 6 oz; lemon, 1.

Mince the beef suet very fine and make a light paste of it and the flour; roll the paste thin, and fill it with the apples; add the grated rind and strained juice of the lemon, tie it in a cloth, and boil it from an hour and a quarter to an hour and a half. Grated nutmeg, or a little powdered cinnamon may be substituted for the lemon when either is preferred. To convert this into a richer pudding use half a pound of suet for the crust, and add to the apples a tablespoonful or two of orange or quince marmalade.

Arrowroot Pudding (Baked).—Make as directed for corn-starch pudding.

Batter Pudding (Baked).—*Take :*–Flour, 6 oz; eggs, 3; milk, 1 pint; salt, 1 saltspoonful.

Mix the salt thoroughly with the flour, and add very gradually the eggs, which must previously have been beaten to a light froth; beat up the batter well, and stir to it by degrees the milk, which should be perfectly fresh; pour the batter into a buttered dish, and bake three-quarters of an hour in a moderate oven. If properly managed this pudding will be extremely light and delicate, and the surface will be crisp. Serve with preserved or stewed fruit. The same mixture may be baked in buttered cups from twenty to thirty minutes, turned out, and served with sugar sifted thickly over.



Pudding served with Preserves.

Batter Pudding, (Boiled.)—I. *Take :*–Flour, 6 oz; milk, 1 pint; eggs, 2; salt, ¾ teaspoonful.

Beat the eggs smooth, mix half of the milk with them, and pass the whole through a sieve; add this *very gradually* to the flour, and when the batter is perfectly smooth, thin it with the rest of the milk. Shake out a wet pudding-cloth, flour it well, pour the batter in, tie it securely (leaving room to swell), and put it immediately into plenty of fast boiling water. Boil it an hour and ten minutes. Send it to table the instant it is dished, with wine sauce, a hot *compote* of fruit, or raspberry vinegar. To render this pudding *very* light, a portion of the whites of the eggs, or the whole of them, should be whisked to a froth and stirred into the batter just before it is put into the cloth.

II.—*Take:*–Flour, sifted, 3 gills; eggs, 3; salt, ½ teaspoonful; milk, from ½ to a whole pint.

Mix the yolks of the eggs and the flour to a smooth batter, thin with milk till it is of the consistence of cream; whisk the whites of the eggs separately, stir them into the batter, and boil the pudding in a floured cloth, or in a buttered mould or bowl, for an hour. Before it is served, cut the top quickly with a large dice half through the pudding, pour over it a small jarful of currant, raspberry, or strawberry jelly, and send it to table *instantly*

Berry Pudding (Boiled).—Make a stiff batter with flour and cold water, adding a little salt; beat it well until quite smooth, and then mix in as many berries (blackberries, raspberries, huckleberries and currants) as it will hold; flour a pudding-cloth, pour in the batter, and tie up tight. Boil it four hours. Serve with liquid sauce.

Bird's-nest Pudding (Baked).—Pare tart, well-flavored apples, and core without dividing them; put them in a deep dish with a tablespoonful of sugar and a small bit of mace or grated lemon-peel in the opening of each apple. Mix as much custard as will fill the dish; allow seven eggs to a quart of milk, and season with sugar and lemon, or peach-water. Fill the dish quite full, set it into a pan with a little water, and bake one hour. Serve with wine sauce.

Brandy Pudding (Boiled).—Line a mould with raisins, stoned, or dried cherries, then with thin slices of French roll; next add ratafias or macaroons; then again fruit, rolls, and cakes in succession until the mould be full, sprinkling in two wineglassfuls of brandy. Beat four eggs, yolks and whites; put to a pint of milk or cream, lightly sweetened, half a nutmeg, and the rind of half a lemon finely grated. Let the liquid sink into the solid part; then flour a cloth, tie it tight over, and boil one hour. Keep the mould the right side up.

Bread Pudding (Baked).—I. *Take:*–Bread-crumbs, 6 oz; butter, 1 oz; milk, 1 pint; sugar, 3 oz; eggs, 5 yolks, 3 whites; candied orange-peel, 2 oz; a little nutmeg.

Pour the milk boiling hot over the bread-crumbs, add the butter, and let them stand till the bread is well soaked; then stir to them the sugar, eggs, orange-peel, and a flavoring of nutmeg. Pour this into a dish, and place it in the oven; when nearly baked, place lightly over the top the whites of three eggs beaten to a firm froth and mixed at the instant with three heaping tablespoonfuls of sifted sugar. Bake the pudding half an hour in a moderate oven. The icing may be omitted, and an ounce and a half of butter, just warmed, put into the dish before the pudding, and plenty of sugar sifted over it just as it is sent to the oven. *Or*, it may be made without either, and served with liquid sauce.

II.—*Take:*–Bread-crumbs, 8 oz; milk, 1 pint; butter, 3 oz; sugar, 4 oz; currants, 6 oz; cream, 1 gill; candied orange or citron, 1½ oz; eggs, 5.

Mix the milk and cream together, boil them, and pour them scalding hot on the bread-crumbs and butter; cover with a plate and set aside for half an hour; then stir to them the sugar, currants, orange or citron, and eggs. Bake half an hour.

Bread Pudding (Boiled.)—*Take:*–Milk, 1 pint; sugar, 3 oz; butter, 1 oz; salt, a pinch; bread-crumbs, ½ lb; eggs, 4; nutmeg or lemon-peel to taste.

Dissolve the sugar in the milk, throw in a pinch of salt, and pour it boiling hot on the bread-crumbs; add the butter, and cover with a plate; let them stand half an hour, and then stir to them the eggs, well-beaten; flavor with nutmeg or lemon-peel, and pour the mixture into a thickly-buttered mould or bowl, which holds a pint and a half, and which should be quite full; tie a paper and a cloth over the top, and boil the pudding an hour and ten minutes.

This is quite a plain pudding, but by omitting two ounces of the bread, and adding more butter, another egg, a wineglassful of brandy, the grated rind of a lemon, and as much sugar as will sweeten the whole, a very rich pudding will be obtained. Candied orange-peel has a good effect when thinly sliced in it; and half a pound of currants is a still further improvement.

Bread and Butter Pudding (Baked).—I. *Take:*–Bread and butter; milk, 1½ pints; sugar, 4 oz; eggs, 4; ½ nutmeg; currants, 3 oz.

Dissolve the sugar in the milk, and stir it into the eggs well beaten; grate half a nutmeg over them, and pour the mixture into a dish which holds about three pints, and which is filled almost to the brim with layers of stale bread and butter, between which the currants have been strewed. Bake from three-quarters of an hour to an hour. The currants may be omitted from this receipt; and orange-flower water or grated lemon-peel may be substituted for the nutmeg, if preferred.

II. (*Rich.*)—*Take:*–Milk, 1 pint; rind of 1 lemon; bitter almond, 6 (or ¼ drachm of cinnamon); cream, ¼ pint; sugar, 4 oz; eggs, 6; brandy, 1 wineglassful; bread and butter, 3 layers; currants, 4 oz; candied orange or lemon-peel, 1½ oz.

Put the bitter almonds, bruised, (or lemon-peel, or cinnamon, as may be preferred,) into the milk, and simmer till the latter has a good flavor; then strain the milk, mix it with the cream, sweeten it with the sugar, and stir into it while still hot the well-beaten eggs; throw in a few grains of salt, and then add the brandy, stirring the mixture briskly. Have ready in a thickly-buttered dish three layers of thin bread (buttered), with the currants and finely-sliced candied peel strewed between and over them; pour the milk and eggs on them by degrees, letting the bread absorb one portion before another is added. It should soak for a couple of hours before being taken to the oven. Bake half an hour in a moderate oven. The cream may be omitted from this pudding, and milk alone used; or, cream may be substituted for the entire quantity of the milk.

Cabinet Pudding (Boiled).—I. *Take:*–Raisins or dried cherries, 3 dozen; penny sponge-cakes (or remnants of sponge-cake), 3 oz; macaroons, 4; ratafias, 2 oz; candied citron, 1½ oz; eggs, yolks of four, whites of three; milk, ½ pint; cream, ¼ pint; sugar, 2½ oz.

Split and stone the raisins, or take an equal number of dried cherries, and place either of them regularly in a sort of pattern in a thickly-buttered quart mould or bowl; next, slice and lay into it the sponge-cake; add the macaroons, ratafias, and candied citron (sliced thin); then the yolks and the whites of the eggs beaten

separately, mixed with the milk, strained into the cream, and sweetened with the pounded sugar; these ought nearly to fill the mould. Steam the pudding, or boil it very gently for an hour; let it stand a few minutes before it is dished, that it may not break; and serve with brandy or wine sauce. This pudding may be made with remnants of light biscuits, sponge-cake, macaroons, etc.

II. (*Very Fine.*)—*Take:*–Dried cherries or raisins, 3 to 4 oz; sponge-biscuits, ½ lb; ratafias, 4 oz; thin cream, or cream and milk, 1 pint; sugar, 3 oz; vanilla, ½ pod or thin rind of ½ lemon, and six bitter almonds, bruised; eggs, yolks of 6, whites of 2; brandy, 1 wine-glassful; preserved ginger and candied citron to taste.

Butter thickly a quart mould or bowl, and ornament it tastefully with the cherries, or with the finest muscatel raisins, opened and stoned; lay lightly into it the biscuits cut in slices and intermixed with the ratafias. Add the sugar in lumps to the milk, and flavor lightly with the vanilla, or the lemon peel and bitter almonds; strain and pour this hot to the eggs, well-beaten, and when nearly cold stir the brandy in gradually; when quite cold, pour it gently, and by degrees, into the mould, and steam or boil the pudding gently for an hour. Serve it with wine-sauce. Never omit a buttered paper over any sort of custard-mixture; and remember that quick boiling will spoil the appearance of this pudding.

Cherry or Currant Pyramid (boiled).—Wash and stem the cherries, or pick the stems off the currants. Make a light paste (*see* PIES, roll it out a quarter of an inch thick, and cut for the bottom crust a round piece about the size of a tea-plate; spread a layer of the fruit upon this, leaving a half-inch margin all round, and sprinkle with sugar; roll out a second sheet, an inch smaller than the first, lay it carefully on the fruit, and turn up the margin of the lower crust over the edge of this; spread this in turn with the fruit and sugar, and cover with a still smaller round; proceed in this manner until the sixth and last crust is no more than three inches in diameter. Have ready a pudding-bag of the size and shape of the pudding and long enough to meet and tie under the base without cramping the pudding, dip it in boiling water, flour it well inside, and draw it carefully over the pyramid. Boil it for two hours, and serve with either hard or liquid sauce. To aid in handling, form the pyramid on a plate, and tie the bag underneath; serve the pyramid on the same plate, if liked, with a napkin placed between it and a larger plate.

Cocoanut Pudding (baked).—*Take:*–Cocoanut, butter, and sugar, equal parts; eggs, 5; cream, one teacupful; grated lemon peel.

Grate the cocoanut, and allow the same weight of butter and also of fine white sugar. Stir the butter and sugar to a light cream, and add the eggs, well beaten, the cream, the milk of the cocoanut, and enough grated lemon-peel to flavor the whole. Line a dish with a rich paste put in the pudding, and bake it an hour in a moderate oven. Cover with letter-paper if the top browns too rapidly.

Corn-starch Pudding (baked).—*Take:*–Corn-starch, 4 tablespoonfuls; milk, 1 quart; eggs, 4; sugar, ¾ teacupful; butter, 1 tablespoonful; cinnamon and nutmeg to taste.

Heat the milk to boiling; dissolve the corn-starch in a little cold milk, stir it in, and boil three minutes, stirring constantly; remove from the fire and while still very hot, add the butter; set aside till cold. Beat the eggs very light, the whites and yolks separately, mix the sugar and seasoning with them, and add to the corn-starch; beat the whole thoroughly to a smooth custard; turn into a buttered dish, and bake half an hour. This pudding should be eaten cold with powdered sugar sifted over it.

Cracker Pudding (baked).—*Take:*–Crackers, finely pounded, 10 oz; sugar, 3 or 4 table spoonfuls; melted butter, 2 tablespoonfuls; wine, 1 wine-glassful; half a nutmeg; a little salt; eggs, 8; milk 3 pints.

Mix the crackers (which should be very finely pounded) with the sugar, butter, wine, nutmeg, and salt,—and put into a buttered dish; beat the eggs to a froth, stir in the milk, and turn them on the rest of the ingredients. Let the pudding stand till the crackers are swollen and soft; then bake it half an hour in a moderate oven.

Custard Pudding (baked).—*Take:*–Eggs, 7; sugar, ½ lb; milk, 1 quart; peach-water or essence of lemon to taste.

Beat the eggs and sugar together, stir them into the milk, and season to taste with the peach-water or lemon; pour it into a buttered dish that will just hold it; set a pan half full of water into the oven, and set the pudding-dish into it. Bake three quarters of an hour.

Custard Pudding (boiled).—(*Take:*–Eggs, 3; milk, 1 pint; sugar; lemon or orange.

Beat the eggs very light, put them into a pint bowl, and add to them enough milk to fill it; then strain, flavor, and sweeten it with pounded sugar; boil the pudding very slowly for half an hour, let it stand a few minutes, and dish; serve it with sugar sifted over, and sweet sauce in a tureen, or send stewed currants, cherries, or gooseberries to table with it. For flavoring this pudding the sugar (in lumps) with which it is sweetened may be rasped on a lemon or an orange, then crushed and dissolved in the milk; from an ounce and a half to two ounces will be sufficient for general taste.

Delmonico Pudding (baked).—*Take:*–Milk, 1 quart; corn-starch, 4 tablespoonfuls; eggs, 4; sugar, 9 tablespoonfuls; flavor to taste.

Dissolve the corn-starch in a little cold milk, add it to the rest of the milk, and boil three minutes; beat the yolks of the eggs with six tablespoonfuls of sugar, stir in the milk and corn-starch, and flavor to taste; beat the whites of the eggs to a stiff froth, add three tablespoonfuls of powdered sugar and flavor; set the pudding in the oven and as soon as it stiffens, spread the icing (white of eggs and sugar)

over the top, and bake to a light brown. Eat cold with cream.

Dutch Custard, or Raspberry Pudding (Baked).—*Take :*–Raspberries, 1 ½ pints; sugar, 6 oz; eggs, 6.

Line a tart-dish with puff-paste and lay in the raspberries well mixed with three ounces of the sugar; beat the eggs with the remaining three ounces of sugar, and pour it over the fruit; bake the pudding from twenty to twenty-five minutes in a moderate oven.

Farina Pudding (Baked).—Make as directed for corn-starch pudding.

Fruit Pudding (Boiled). — Make a light rich suet paste, and roll out into one sheet; lay apples, pared, cored, and sliced, or peaches, or raspberries, in the centre; sweeten freely with sugar, and close the paste snugly over them; dip a pudding-cloth in hot water, flour the inside, tie the pudding up in it and boil two hours and a half. Serve with either hard or liquid sauce.

Gooseberry Pudding (Baked).—*Take :*– Green gooseberries, 1 lb; sugar, 5 oz; butter, 1 ½ oz; water, ¼ pint; bread-crumbs, 2 oz; eggs, 4.

Boil the sugar and gooseberries together in the water, from ten to twelve minutes; then beat the fruit to a mash, and stir in the butter; when nearly or quite cold, add the bread-crumbs (very fine), and the well-beaten eggs. Bake in a slow oven from a half to three-quarters of an hour. To make a richer pudding of this kind, press the fruit through a sieve, mix it with four or five crushed crackers, and use double the quantity of butter.

Green Corn Pudding (Baked).—Having grated sweet corn from eighteen good sized ears, add half a gill of sugar, four ounces of butter, a little salt and six well beaten eggs; stir in a pint of hot milk, pour the whole into a buttered baking dish, and bake nearly an hour.

Or, to corn from twelve ears add two ounces of butter, a pinch of salt, two well beaten eggs, a pint of hot milk and half a gill of sugar; bake three-quarters of an hour. Instead of grating the corn, slit every row lengthwise; cut off the rounding part and with the back of the blade, push out the eyes and the cream.

Hasty Pudding.—Put a quart of water and a teaspoonful of salt over the fire; when hot (not boiling) take out half a pint and mix it with half a pint of corn meal, when the water boils pour this in and stir until it thickens enough for the spoon to stand up in it, then let it boil slowly (stirring occasionally) for an hour and a half. It is nice the next day cut in slices and fried, but for this must be made stiffer; a gill of meal should be added. It must be perfectly cold before it is fried; then cut it in slices half an inch thick, flour them and fry them brown in a little lard.

Huckleberry Pudding (Boiled). — Mix a teaspoonful of soda in a pint of molasses (dissolving it first in a spoonful of the molasses) stir in a quart or three pints of huckleberries, and sift in one quart of flour; tie it in a floured bag, leaving a little room, and boil or steam it from three to four hours. Eaten hot with sauce; spices may be added, if liked.

Indian-meal Pudding (Baked).—I. *Take :*—Boiling milk, 1 pt.; corn meal, 3 gills; molasses, 3 gills; ginger, 1 tablespoonful; cinnamon, 1 teaspoonful; salt, ½ a teaspoonful; drippings (or butter), 1 oz; eggs, 3; lemon (grated rind), 1.

Pour the milk on all the ingredients but the eggs; cover for an hour; add the well-beaten yolks and the whites whisked to a stiff froth; bake about three-quarters of an hour, stirring occasionally during the first quarter.

II. (*Without Eggs*).— *Take :*–Indian meal, 7 heaping tablespoonfuls; butter or lard, 2 tablespoonfuls; salt, 1 teaspoonful; molasses, 1 teacupful; ginger or cinnamon, 2 teaspoonfuls; milk, 1 quart.

Pour the milk boiling hot to the other ingredients, and mix together thoroughly; put into a buttered dish, and at the moment of setting it in the oven, stir in a teacupful of cold water; bake three quarters of an hour.

Indian-meal Pudding (Boiled).—*Take :*– Indian-meal, 1 quart; milk, 1 quart; eggs, 3; sugar, 3 heaping tablespoonfuls; beef-suet minced very fine, ½ lb; salt, 1 teaspoonful.

Pour the milk, boiling hot, upon the meal and stir in the suet and salt; set aside to cool; beat the yolks of the eggs with the sugar, add them to the batter, and then add the whites; tie in a floured cloth, leaving room to swell one-fourth and boil five hours. Serve hot with butter and sugar.

Lemon Pudding (Baked).—*Take :*–Butter, 3 oz; sugar, 1 lb; eggs, 9; lemons, 2; flour, 1 ½ even teaspoonfuls; milk 1 pt.

Beat the yolks and sugar until very light; add the butter with which the flour has been smoothly mixed; then the juice and grated rind of the lemons; stir in the milk, and then beat in very gently and thoroughly the whites, whipped to a stiff froth; line a dish with very thin puff-paste, pour in the pudding, and bake in a slow oven three-quarters of an hour.

Lemon-suet Pudding (Baked).—*Take :*– Bread-crumbs, ½ lb; beef suet, 6 oz; pounded sugar, 3 ½ oz; lemon, large one; currants, 6 oz; eggs, 4 large or 5 small.

Mince the suet very fine, and mix it with the bread-crumbs; add the sugar, the currants, the grated rind and strained juice of the lemon, and the well beaten eggs; mix together thoroughly, put into a thickly buttered dish and bake in a brisk oven for an hour, drawing the dish towards the mouth of the oven when the pudding is of a fine brown color. Turn it from the dish before it is served, and sift sugar over it or not, at pleasure. Two ounces more of suet may be added if a very decided flavor of it is liked; the pudding is good without the currants.

Macaroni Pudding (Baked). — *Take :*– Macaroni, 1 teacupful, broken into pieces an inch long; milk, 1 quart; eggs, 4; sugar, ¾ teacupful; butter, 2 tablespoonfuls; lemon, ½.

Simmer the macaroni in half the milk, until tender; beat the yolks of the eggs up with the

sugar, and stir them into the *hot* macaroni, then the butter, the lemon, the milk, and lastly the whites of the eggs beaten to a stiff froth; put into a buttered mould and bake half an hour, or until browned.

Marrow Pudding (Baked or Boiled).—*Take*:–Beef-marrow, ½ lb; milk, 1 quart; the crumbs of a French roll or of six penny sponge-cakes; currants ¼ lb; candied citron, 3 oz; brandy, 3 tablespoonfuls; grated nutmeg, 1; eggs, yolks of 8 and whites of 3; salt, ½ teaspoonful; lemon, peel of 1; cinnamon.

Boil the lemon-peel and a small piece of cinnamon in the milk; strain it, and pour it boiling hot upon the bread or cake-crumbs, and cover it up till cool; then stir in the beef marrow, chopped fine, the currants, the candied citron, sliced, the brandy, the nutmeg, the yolks and then the white of the eggs, with the salt mixed in them. *Bake* three-quarters of an hour in a dish edged with paste, and serve with loaf-sugar sifted over it. Or *boil* two hours, and serve with sweet sauce.

Orange Pudding (Baked).—Cream an ounce of butter and stir in the grated yellow rind of two oranges, the juice and soft pulp of three, half a pint of sugar, four and a half even tablespoonfuls of rolled and sifted crackers, four well beaten eggs and half a pint of milk; mix well and bake in deep plates lined with paste. *Or*, use half a pound of sugar, quarter of a pound of butter, six eggs, (the whites beaten to a stiff froth), the grated rind and juice of two oranges and a pint of cream.

Pine-apple Pudding (Baked).—*Take*:–Pine-apple, 1; sugar, equal weight; butter, half its weight; cream, 1 teacupful; eggs, 5.

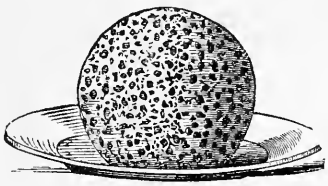
Pare the pine-apple, carefully cutting out all the specks, and grate it fine; weigh it and allow an equal weight of sugar, and half the weight in butter; stir the sugar and butter to a cream, and add it to the pine-apple; then add the eggs, well beaten, and the cream; the dish may be lined with crust or not, as preferred. Bake half an hour in a moderate oven.

Plum Pudding (Baked).—*Take*:–Beef suet, ½ lb; stoned raisins, ½ lb; currants, ½ lb; sugar, ¼ lb; flour, ½ lb; eggs, 4; milk, 1 teacupful; brandy, 1 wineglassful; candied citron, and lemon or orange-peel, 1 oz each; nutmeg or powdered ginger, to taste; a small pinch of salt.

Beat the above ingredients together very lightly, pour it into a well-buttered mould or cake-tin, and bake in a moderate oven from one to one and a half hours. Serve with very sweet sauce, or with marmalade.

Plum Pudding (Boiled).—**I.** *Take*:–Eggs, 4; milk, 1 pint; salt, 1 teaspoonful; beef-suet, chopped very fine, ½ lb.; raisins, stoned and chopped, 1 lb; currants, ¼ lb; brown sugar ¼ lb; nutmeg 1 grated; candied lemon or orange-peel, sliced, 1 oz; brandy, 1 wineglassful; white wine, 1 wine-glassful; flour.

Beat up the eggs well, and add to them first half a pint of the milk and a teaspoonful of salt; then mix in the beef-suet, the raisins, currants, sugar, nutmeg, and candied peel; stir all well together, and add the rest of the milk; next beat in sufficient flour to make it a stiff paste;



Plum Pudding.

adding the brandy and wine; tie it up close, and boil it, if in a mould five hours, if in a cloth, four.

For *Sauce* melt some butter; stir in enough loaf-sugar to make it very sweet; add a wineglassful each of brandy and white wine; boil it up once, and pour half over the pudding, and serve the rest *hot* in a sauce-boat.

Plum puddings may be made a fortnight or longer before they are wanted, and will be all the better for keeping, if hung up in a dry place where they will not mould.

Potato Pudding. (Baked).—**I.** *Take*:–Potatoes, 1¼ lbs; butter 3 oz; sugar 5 or 6 oz; eggs, 5 or 6; lemon-peel, 1; salt, a few grains.

Boil the potatoes very dry and mash them perfectly smooth while hot; mix with them first the butter, then the sugar, eggs, salt, and grated lemon-peel; pour the mixture into a well buttered dish, and bake in a moderate oven forty minutes. It should be turned out of the dish and sent to table with fine sugar sifted over it; or for variety, red currant jelly, or any other preserve, may be spread on it as soon as it is dished.

When cold, this pudding is like cake.

II. (*Richer*).—*Take*:–Potatoes, 14 oz; butter, 4 oz; sugar, 4 oz; eggs, 5; lemon-peel, 1; brandy, ½ wineglassful; candied peel, 1½ to 2 oz; a little salt.

Beat up as before, and pour into a thickly buttered dish or mould, ornamented with slices of the candied orange or lemon-peel; pour a little melted butter on the top, and then sift plenty of white sugar over it. Bake 40 minutes.

Quince Pudding (Baked).—*Take*:–Quinces, 6 large; sugar ½ lb; eggs, 6; cream, ½ pint.

Pare and grate the quinces; beat the eggs and add them, together with the sugar and cream; flavor with rose-water and bake in a buttered dish three quarters of an hour.

Raisin Pudding (Baked).—**I.**–*Take*:–Flour ¾ lb; stoned raisins, ¾ lb; beef-suet, 6 oz; salt, small pinch; eggs, 3; milk ¼ pint; nutmeg, ½ teaspoonful.

Beat the eggs thoroughly, stir the milk in, and add to the rest of the ingredients; pour the whole into a buttered dish, and bake it an hour and a quarter. For a large pudding, increase the quantities one half.

II. (*Richer*).—*Take*:–Stoned raisins, 1 lb; beef-suet, minced fine, 10 oz; flour, ¾ lb; salt,

a small pinch; nutmeg, ½ grated or the grated rind of a lemon; eggs, 4; milk.

Mix the above ingredients lightly together using as much milk as is necessary to make the whole into a *very* thick batter; bake an hour and twenty minutes. The addition of sugar to this pudding will be found no improvement, as it will render it much less light.

Raisin Pudding (boiled).—I. *Take :*–Flour, ½ lb; bread-crumbs, 4 oz; beef suet, chopped fine, 1 lb; *stoned* raisins, 1 lb 6 oz; candied-peel, 1½ oz; nutmeg, ½; eggs, 4 or 5; butter, salt and ginger; milk.

Mix the above ingredients together, using enough milk to make the whole into a *very* thick batter; pour the mixture into a well-floured cloth of close texture, which has previously been dipped into hot water, and wrung out; boil in plenty of water for four hours and a half. Serve with very sweet wine or punch sauce.

II. (*Simpler.*)—*Take:*–Flour, 1 pt and 3 gills; sweet milk, ½ pt; chopped suet, ½ pt; chopped raisins, ½ pt; molasses, ½ pt; soda, ¾ teaspoonful; salt, ½ teaspoonful.

Mix thoroughly together, adding the soda dissolved in a little of the milk before putting in all of the flour. Boil or steam it, in a mould or bag, for three hours. To be eaten with a rich sauce.

Raspberry Pudding. (*See* DUTCH CUSTARD PUDDING.)

Rice Pudding (baked).—1. *Take :*–Rice 6 oz; milk, 1 quart; sugar, 3 oz; eggs, 3 large or 4 small; flavoring of nutmeg, lemon-peel, or cinnamon.

Throw the rice into plenty of cold water, and boil it gently from eight to ten minutes; drain it well in a sieve or strainer, and put it into a sauce-pan with the milk; let it stew from three quarters of an hour to an hour; then sweeten it with the sugar, and stir to it gradually the eggs beaten and strained; flavor it with nutmeg, cinnamon, or lemon-peel, and bake it in a slow oven for an hour.

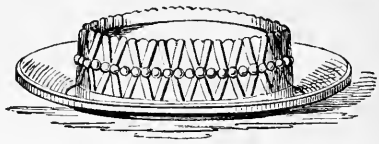
II. (*Without Eggs.*)—*Take:*–Rice, 6 oz; milk, 3 pts; butter, 1 oz; sugar, 4 oz; salt, 1 teaspoonful.

Wash rice in several waters; add in other ingredients, place in oven, allow over two hours for baking. When butter is melted, stir until mixed. Bake slowly and be sure to take it out at the right moment. It is done when on tipping the dish, the rice and milk move together.

Rice Pudding (boiled).—I. *Take :*–Rice, 6 oz; raisins, ¾ lb; *or* apples, 1 lb.

Wash the rice carefully, mix it with the raisins, tie them in a floured cloth, giving them plenty of room to swell; boil them three-quarters of an hour, and serve with very sweet sauce. *This is an excellent pudding for children.* A pound of apples, pared, cored, and quartered, may be used instead of the raisins; boil 1¼ to 1½ hours.

II. (*Richer*)—*Take :*–Rice, 4½ oz; milk, 1½ pints; sugar, 3 to 4 oz; salt, a few grains; bitter almonds, 4 to 6; lemon, peel of ½; eggs, 4. Put the rice into the cold milk, beat it gradually, and boil slowly till it is quite soft and thick; while still quite hot, add the sugar, and stir in the grated lemon-peel, the bitter-almonds pounded to a paste, and the well-beaten eggs; let the mixture cool, and then pour it into a



Rice Pudding Mould.

thickly-buttered mould or bowl, which should be quite full; tie a buttered paper and a floured cloth over it, and boil exactly an hour. Let it stand two or three minutes before it is turned out; and serve it with sweet sauce, fruit syrup, or a *compote* of fresh fruit. An ounce and a half of candied orange peel will improve this pudding; and a couple of ounces of butter may be added to enrich it, when the receipt is considered too simple without.

Rice-flour Pudding (baked.)—*Take :*–Rice-flour (ground rice), 5 oz; milk, 1 quart; butter, 4 oz; sugar, 5 or 6 oz; salt, ½ saltspoonful; eggs, yolks of 8, whites of 2; lemon, peel of 1; brandy, 1 large wine glassful.

Mix the rice smooth in half a pint of the milk, and pour it into the rest of the milk, which should be boiling fast; set over a gentle fire ten or twelve minutes, stirring constantly to keep it from burning to the pan; before taking it from the fire, add the butter, sugar, and salt; turn it into a pan and stir it a few minutes, to prevent its hardening at the top; then mix with it by degrees, but quickly, the yolks and then the whites of the eggs, the grated lemon-peel, and the brandy. Lay a border of rich paste round a buttered dish, pour in the pudding, strain a little melted butter over the top, moisten the paste with a brush, or small bunch of feathers dipped in cold water, and sift plenty of sugar over it, but less over the pudding itself. Bake in a *slow* oven for three quarters of an hour. This is a rich and delicious pudding.

Rhubarb Pudding (baked).—Prepare the rhubarb as directed for pies; butter a pudding-dish thickly, and cover the bottom with buttered slices of bread; cover with the rhubarb cut into short pieces; sprinkle freely with sugar; then put on another layer of bread and butter, and proceed thus until the dish is full. Cover closely and bake for an hour and a half, remove the lid, and bake ten minutes, or until browned. Serve with sweet sauce.

Sago Pudding (baked).—*Take :*–Sago, ½ lb; milk, 1 quart; cinnamon or mace, 1 stick; melted butter, ½ teacupful; sugar, 4 heaping tablespoonfuls; eggs, 6; Zante currants.

Wash the sago in hot water, and boil it till soft, with the cinnamon or mace in the milk; stir it often, or it will burn; when soft, add the melted butter, the sugar and the well-beaten

eggs; pour into a buttered dish, and just as it is going into the oven, strew some Zante currants over the top. Bake in a moderate oven half an hour. The currants may be omitted from this receipt without injuring the pudding.

Sister Jonathine (Steamed).—Rub an ounce and a half of lard and half a teaspoonful of salt into half a pound of flour that has been sifted with two and a half even teaspoonfuls of baking powder; mix with a gill and a half of milk. Have fine sour apples pared, quartered and cored, and placed closely in a pie tin; roll out the crust and lay it over them, make a cut in the centre; steam for three quarters of an hour, then turn it upside down and serve at once, with brown sugar and cream, or a rich sauce.

Snow Pudding.—Milk, 1 pint; isinglass, ½ oz, or 2 strips; sugar, 10 oz; eggs, 5; lemons (rind and juice), 2.

Soak the isinglass two hours, or over night, well covered, in cold water; take it out and pour over it one pint of boiling water; add the yellow rind cut in long parings, the juice and the sugar; place on ice and when partly stiffened take out the rind and beat in thoroughly the whites of four eggs beaten to a froth: pour in moulds wet with cold water and leave on ice for several hours. Serve with a custard made of the remaining egg, the four yolks and the milk flavored with vanilla.

Sponge-Cake Pudding (Baked).—Sponge biscuits, 3; candied lemon or orange peel, 1 oz; eggs, 6; milk, 1¼ pints; sugar, 3 oz; lemon, peel of, 1; brandy, ½ wineglassful; butter, ½ oz; sifted sugar, 1½ oz.

Slice into a well-buttered tart-dish three penny sponge-biscuits, or an equal amount of sponge cake, and place on them the candied orange or lemon-peel cut in strips. Beat the eggs thoroughly, and stir to them the boiling milk, in which the sugar has previously been dissolved; grate in the lemon-peel, and when they are somewhat cooled, add the brandy; while just warm, pour the mixture over the cakes and let it remain an hour; then strain an ounce and a half of melted butter over the top, or strew pounded sugar rather thickly over it; bake in a slow oven for three-quarters of an hour or more.

Squash Pudding (Baked).—Cut half a winter squash into several pieces, take out the seeds, steam until tender, scrape the pulp from the rind, press it through the colander and to one quart add five ounces butter, one pound of brown sugar, two tablespoonfuls of ginger, and four of cinnamon, the yolks of eight eggs well beaten, a pinch of salt and a quart of boiling milk; mix well, add the whites of the eggs, beaten to a stiff froth, mix gently, pour in paste-lined pie-plates and bake at once in so moderate an oven that the mixture will not bubble. As some squashes absorb more milk than others it is well to know that the mixture should be about the thickness of ordinary boiled custard. Pumpkin pudding may be made in the same way.

Suet Pudding (Boiled).—I. *Take:*–Flour, 2½ teacupfuls; beef-suet chopped very fine, 1 teacupful; milk, 1 teacupful; molasses, 1 teacupful; fruit, 1 teacupful; saleratus, 1 teaspoonful; salt, to taste.

Mix the suet with the flour, add the other ingredients and mix to a thick paste; tie closely in a well-floured cloth, and boil hard for three hours. Serve with brandy sauce.

II.—*Take:*–Stale bread-crumbs, ½ lb; flour, ¾ lb; beef-suet chopped extremely fine, 10 to 12 oz; salt, ½ teaspoonful; nutmeg, rather less than ½ teaspoonful; eggs, 2; milk.

Mix the above ingredients, using enough milk to make them into a somewhat lithe but smooth paste. Boil two hours and a quarter.

Sunderland Pudding (Baked).—*Take:*–Eggs, 6; boiling milk, 1 pint; flour, 3 tablespoonfuls; salt, a small pinch.

Beat the yolks of the eggs and mix them with the flour; add the milk and salt; whip the whites to a stiff froth, stir them in; pour into a buttered dish, and bake half an hour in a moderate oven. Serve with liquid sauce.

Sweet Potato Pudding (Baked).—*Take:*–Sweet potatoes, ½ lb; sugar, 6 oz; butter, 6 oz; eggs, 8; lemon, 1; wine, 1 wine glassful; nutmeg, 1.

Parboil the sweet-potatoes and grate them fine, stir the sugar and butter to a cream, and add them to the potatoes; then add the beaten yolks of the eggs: mix together well, and add the grated peel and juice of the lemon, the wine, and the grated nutmeg; lastly, add the whites of the eggs whipped to a stiff froth; put into a buttered dish, and bake three-quarters of an hour in a moderate oven.

Tapioca Pudding (Baked).—*Take:*–Tapioca, 1 teacupful; milk, 1 quart; sugar, 2 tablespoonfuls; melted butter, 2 tablespoonfuls; eggs, 5.

Cover the tapioca with cold water, and soak two hours; drain off what water is not absorbed, and soak the tapioca two hours longer in the milk; when the tapioca is quite soft, beat the sugar and butter to a cream; add the yolks of the eggs, then the tapioca and milk, and lastly the whites of the eggs. Stir well together, pour into a buttered dish, and bake half an hour. Serve with hard or liquid sauce.

II. (*With Apples.*)—Soak half a pint of tapioca over night in cold water; cover the bottom of a baking dish with cored sour apples filled with sugar; bake until soft and brown; add to the tapioca half a pint of cold water with the yellow rind of a lemon; boil and add half a pint of boiling water, the juice of the lemon and a gill of sugar; boil a moment, pour it over the apples and bake slowly one hour.

III.—*Take:*–Tapioca, 1 teacupful; water, 1½ pints; salt, 1 teaspoonful; apples, 6.

Put the tapioca into a pint and a half of water, add the salt, and let them stand five hours in quite a warm place (not to cook, however), pare and core the apples, put them in a pudding-dish, and fill the holes with sugar, in which has been grated a little nutmeg or lemon-peel;

add a teacupful of water, and bake an hour; then pour the tapioca over the apples, and bake another hour. Serve with hard sauce.

Vermicelli Pudding.—Make as directed for Macaroni Pudding.

Welcome Guest's Pudding (Boiled).—*Take:*—Bread-crumbs, ½ lb; milk or cream, ½ pint; beef-suet, minced very fine, ¼ lb; salt, a small pinch; ratafias, coarsely crushed, 3 oz; candied citron and orange-peel, sliced thin, 3 oz; lemon, 1 large; eggs, 4; sugar, ½ lb.

Boil the milk or cream, and pour it scalding hot on one-half the bread-crumbs; lay a plate over the bowl and let them remain till cold; then stir to them the remainder of the crumbs, the beef-suet, the salt, the ratafias, the candied citron and orange-peel, sliced thin, and the grated lemon-peel. Beat the eggs well and add the sugar to them by degrees; continue to beat them until it is dissolved, and they are very light; then stir them to, and beat them well up with the other ingredients; pour the mixture into a thickly buttered mould or bowl which will hold nearly a quart, and which it should fill to within half an inch of the brim; lay first a buttered paper and then a well-floured cloth over the top, tie tightly and securely, and boil two hours. Let it stand for a minute or two before it is dished, and serve it with wine sauce. This is a very light and wholesome pudding.

Yorkshire Pudding (Baked).—*Take:*—Eggs, 6; flour, half a pint; milk, 1 pint; salt, 1 teaspoonful.

Beat the eggs well, strain, and mix them gradually with the flour; then pour in as much milk as will reduce the batter to the consistence of rather thin cream. The tin which is to receive the pudding must be greased with some of the drippings from a joint of beef that has just been put down to roast; pour in the batter, nearly an inch deep, place it in the dripping pan and let the beef rest on skewers above it; bake about three quarters of an hour, cut in oblong pieces and serve as a garnish for the beef. If the piece of beef is roasting in a small pan the batter may be baked in the same; the only reason for using an inner pan is to have the pudding of the right thickness. May be served with sweet sauce.

Young Wife's Pudding (Baked).—*Take:*—Eggs, 4; sugar 2½ oz. salt, a small pinch; lemon, peel of 1; milk, 1 pint; stale bread.

Beat the eggs up lightly for five minutes, and add the pounded sugar by degrees, and the salt; beat the mixture well, and then grate in the lemon-peel; stir in a pint of cold milk, and pour the pudding into a well-buttered dish. Cut some stale bread in slices rather more than a quarter of an inch thick, and with a very small cake-cutter cut from it enough rounds to cover the top of the pudding; butter them thickly, lay them upon the pudding with the buttered side uppermost, sift sugar thickly on them, and set the pudding into a *slow* oven. Bake one hour. This is a simple, but very nice pudding.

PUFF PASTE. (*See* PIES.)

PUFFS.—To make a dozen plain puffs, take a pound and a quarter of flour, a pound of butter, and one egg. Put them together as directed for puff-paste (*See* PIES). Divide it when made into three equal portions; roll one of them out half an inch thick, and cut it into cakes with a tumbler; roll out the rest of the pastry, cut it into strips with a jagging iron, and lay the strips round those that were cut with the tumbler so as to form a rim. Lay the puffs on buttered flat tins; bake them to a light brown in a quick oven; then fill them with any small preserved fruit that may happen to be convenient.

German Puffs.—*Take:*—Sweet almonds, 2 oz; bitter almonds, 6; eggs, yolks of 6, whites of 3; cream, ½ pint; butter, 4 oz; sugar, 2 oz; brandy or orange-flower water, ½ wineglassful.

Pound the almonds (sweet and bitter) to a perfectly smooth paste; mix with them gradually the yolks and then the whites of the eggs; heat the cream, and dissolve in it the butter and sugar; pour these hot to the eggs, stirring them briskly together, and when the mixture has become cool, add the brandy or orange-flower water. Butter some cups thickly, and strew into them a few slices of candied citron or orange-peel; pour in the mixture, and bake twenty minutes in a slow oven.

Raspberry Puffs.—Roll out thin some fine puff-paste, cut it in rounds or squares of equal size; lay some raspberry jam into each, moisten the edges of the paste, fold and press them together, and bake the puffs from fifteen to eighteen minutes. Strawberry, or any other jam will serve for them equally well.

Spanish Puffs.—Place on the fire 1 pint of milk, 2 oz butter, 2 oz sugar, a pinch of salt. When it boils fast, stir in 8 oz sifted flour. When this mixture leaves the bottom and sides of the stew-pan, take it from fire, beat in 2 whole eggs, one at a time, and 3 yolks, one at a time; lastly, add 2 oz of chopped, blanched jordan almonds. Form into round pieces with a spoon, as large as a walnut, and fry in hot lard to a light brown color. They should swell 3 times in volume. When all fried, make a small incision with a knife, introduce a little bright-colored jelly with a small spoon, roll in sifted sugar, and serve on a folded napkin.

PUMPKIN.—There are several varieties of the pumpkin, among the best of which are the *cheese*, *West India*, *sugar*, and *striped*; any of these are excellent for pumpkin pies, bread, etc. The season for pumpkins commences in September and lasts until January; but if peeled, cut in strips, and dried in the sun, and then laid away in a dry place, they can be kept all the year. They will also keep until spring in a natural state if put in a dry place and protected from the frost. Pumpkins are sometimes cooked and eaten plain like squashes; but their principal use is in pastry, etc. (*See* BREAD, PIES, and PUDDINGS.)

PUMPS. — The pumps generally used in dwelling houses are the *common suction* and the *forcing pump*. The *suction pump* is that employed in ordinary wells not exceeding 28 feet in

depth. When the air is withdrawn from a pipe with its lower end in water, the water will rise from 28 to 31 feet. It requires something heavier than air to keep the valves of this pump closed ; therefore to start it, fill the cylinder with water poured from above ; the piston then descends through this water, as on being pushed down its valve opens and being lifted the water closes its valve effectually, and it creates a vacuum in the cylinder between two valves, which can only be filled up by the water ascending through the suction pipe. The force-pump needs to be better made than the ordinary suction pump. But its valves are more easily kept closed : therefore it does not need water poured in to start it.

PUNCH.–Ordinary punch is made of any distilled liquor with water, hot or cold, sugar and lemons. The proportions and the use of rind and juice are matters of taste. The following rules are quite generally agreed upon : 1st. It should not be too sweet, else it will cloy upon the appetite. 2d. Not too strong else it will go to the head and produce drunkenness. 3d. Too much water will ruin the best punch ever made. 4th. The oil in the yellow rind of the lemon is essential, and the best way to extract it is to rub the rind of the lemon with a lump of sugar. 5. The water should not boil nor should it have been boiled before. 6. The sugar *powdered* will make it creamy. 7. Stir in each ingredient as it is added.

Champagne Cup. I.—Take a bottle of Krug champagne, a pint of tea, a gill of brandy, sweeten to taste and ice well.

Champagne Cup. II.—Take a bottle of sparkling champagne that is iced, a bottle of plain soda, two ounces powdered white sugar, juice and thin peel of one lemon, three thin slices of cucumber ; let stand until the sugar is dissolved, then add a lump of ice and serve.

Francatelli's Rum Punch.—*Take :*—Brandy, 1 quart ; rum, 1 quart : arrack, ½ pint ; strong-made green tea, ½ pint ; lemon, juice of 12, rind of 4 ; nutmeg, 1 (grated) ; cloves, 12 (bruised) ; cinnamon 1 stick (powdered) ; coriander seeds, 30 (bruised) ; pine apple, 2 lbs. (sliced) ; lump-sugar, 9 lbs. ; boiling water, 2 quarts ; milk, 2 quarts.

Put all the above ingredients except the milk into a pitcher holding two gallons, stir them together, and tie a bladder closely on top ; let it steep undisturbed for two days ; then boil the milk, add it to the other ingredients, aud mix thoroughly ; an hour afterwards filter the punch through a clean muslin bag, bottle at once, and cork down tight ; keep the bottles in a cool cellar. It should be iced for use.

Gin Summer-Punch.—*Take :*–Gin, ½ pint ; lemon, 1 ; maraschino, 1 wineglassful ; water, 1½ pints ; sodawater (iced), 2 bottles.

Pour the gin on the lemon-peel, add a little of the lemon-juice. and the rest of the ingredients in the order named.

Grandison Punch.—The thinly-pared rinds of two China and one Seville orange and three limes infused for an hour in a half pint of thin cold syrup, then add the juice of the fruits, a pint of cold strong well sweetened green tea, a glass each of best old Jamaica rum, brandy, Colombo arrack, pine apple syrup, and two bottles of champagne ; strain through a fine lawn sieve. Bottle, and ice before using.

Maitrank.—A May drink pleasant and anti-bilious only to be made in perfection in May when the shoots of the woodroof *asperula odorata* (wald-meister) are plentiful. The stalks of this plant preserve their fragrance when dried, but only communicate it fully to the beverage when used fresh. Pour a bottle of white Rhine wine into a bowl, and infuse into it as many young shoots of the woodroof, cut about an inch in length, as will fill a tablespoon. If the wine be not sweet, add an ounce of finely powdered sugar, cover the bowl, and let it stand twelve hours. Serve in green glasses. Never introduce orange, lemon or any extraneous essence.

Milk Punch. I.—Put 2 tablespoonfuls of rum or brandy, and 1 heaping tablespoonful of sugar into a glass of iced milk. Stir and grate nutmeg on top.

II.—Pare six lemons very thin, steep the peel three days in one pint of old rum, then add one quart of old brandy, the juice of three oranges and three lemons, one quart of water, one pound of loaf sugar and half of a grated nutmeg ; when the sugar is dissolved, mix thoroughly ; add one quart of scalded milk ; cover, and let stand two hours ; then strain. Ice well before drinking. It will keep bottled.

III.—*Take:*–Lemon-juice, 1 pint ; rum, 2 or 2½ quarts ; water, 2 quarts ; milk, 1 quart ; loaf-sugar, 1½ lbs.

Mix the lemon-juice, rum, and water, and dissolve the sugar in them ; then pour in the milk, boiling hot, and add the peel of 4 lemons. In a few minutes taste it, and if it is not to your taste make it so by adding more of any ingredient apparently deficient. Strain it through a bag, and bottle it. It is fit for use immediately, or it may be kept in a cool cellar.

Norfolk Punch.—*Take :*–Lemons, 6 ; Seville (bitter) oranges, 3 ; brandy, 2 quarts ; white wine, 1 quart ; milk 1 quart ; sugar, 1½ lbs.

Pare the lemons and oranges very thin, and squeeze the juice of both into a large jar ; add the other ingredients, mix, and cover for 24 hours ; then strain through a bag till clear, and bottle.

Nuremberg Punch.—Take a half pound of loaf sugar, press upon it, through muslin or a silver strainer, the juice of three large oranges; add a little of the peel, cut very thin; pour upon this a quart of boiling water, a pint of *good* old Batavia arrack and a quart of substantial claret, stir these together well, let it cool and stand a day or two. Ice before using, remembering that ice melting will weaken the punch.

Pine apple Cardinal.—A sliced pine apple put in a deep bowl with two pounds of pounded sugar candy and then left for three hours; then pour over it one bottle each of sherry, Rudesheimer and champagne.

Regent's Punch.—**I.**—*Take:*—Oranges, rind and juice of 2; lemons, 3; cold sugar-syrup, ½ pint; strong green tea, sweetened, 1 pint, best old Jamaica rum, arrack, French brandy, and pine-apple syrup, each 1 wineglassful; champagne, 2 bottles.

Pare the oranges and lemon as thin as possible and steep the rinds for an hour in ½ pint of cold thin syrup; then add them to the juice of the oranges and lemons; add the tea (quite cold) to the fruit and syrup, stir in the rest of the ingredients, and pass the whole through a fine lawn sieve until it is perfectly clear; then bottle, and put it into ice until dinner is served. This is the genuine receipt for the punch of George IV.

II. Take four ounces of clarified sugar, thin peel of one lemon and one orange, one bottle of dry champagne, a half bottle of good brandy, a half gill of rum, one wine glass of maraschino, a few slices of pine apple, and one quart of green tea well iced. Mix thoroughly.

Roman Punch.—*Take:*—Lemonade (strong and sweet), 3 large teacupfuls; rum, 1 wineglassful; champagne, 1 wineglassful; oranges, juice of 2; eggs, whites of 2; powdered sugar, ½ lb.

Beat the whites of the eggs stiff, with the powdered sugar, and mix with the rest of the ingredients. Ice abundantly, or freeze. (*See* CLARET, COBBLER, JULEP, SHERBET, and SHERRY.)

PURGATIVES.—(*See* CATHARTICS.)

PURSLANE.—A common wild plant which is sometimes cultivated, and then becomes much larger and better. The young growth, cut 6 inches long, and served like spinach, is good. It is used in salads, pickles, etc.

PUTTY.—To remove from a window-sash—apply a soldering iron or poker heated (but not red-hot), slowly over the putty. To remove putty from window-panes, *see* CLEANING.

Q

QUAHAUG. (*See* CLAMS.)

QUAIL.—Quails (known at the South as partridge) are among the best-flavored of game-birds; their flesh being white, tender, and extremely delicate. Their size is about one-third that of the partridge or ruffed grouse. They are generally very plentiful in the markets throughout the winter months, except when the preceding winter has been unusually stormy, cold, and snowy. Many thousands are sent from the West to the Eastern markets in a frozen state, and generally arrive in good condition; but those which are killed near by are to be preferred. A quail is old when it has a white bill and bluish legs; when young, the bill is of a rather dark gray color, and the legs are yellowish. The more fresh quails are when cooked, the better.

Quail.

Baked Quails.—Clean, and truss as directed for chicken, or simply tie the legs down to the rump with a strong thread, letting the feet stand up; place the birds on their backs in a baking-

pan with a piece of butter the size of a hazelnut on each; just cover the bottom of the pan with cold water, and set in a quick oven; baste now and then; when about half done, put the liver of the birds well pounded in the baking-pan, and continue basting till the quails are done. Garnish with parsley or water-cress.

Broiled Quails.—Clean, wash, and split down the back; lay in cold water half an hour; then dry carefully with a towel, season with salt and pepper, and broil on a gridiron over a bright fire, laying them breast downwards at first and turning when brown. When done, lay on a hot dish, butter well on both sides, and serve at once.

Pie, (Quail.)—Make as directed for pigeon-pie. (*See* PIGEON.)

Roast Quails.—Prepare as for baking; dredge them with a little flour; and roast before a good fire fifteen or twenty minutes, basting freely with butter. Garnish with parsley or water-cress.

QUASSIA.—The wood of a tree growing in the West Indies called *Picræna excelsa.* The wood is tough, but not very heavy, and is usually sold as chips. Sometimes drinking-vessels, carved out of the wood, are sold. These are to be filled with water at night, allowed to stand till morning, and the contents then drunk. The quassia wood is intensely bitter, and yields its bitterness readily to water. The medicinal preparations from it are an extract, a tincture, and an infusion. Of these the infusion is most used, chiefly as a vehicle for administering more nauseous medicines, for which it is excellent, being one of the very few bitters which contains no tannin, and so does not blacken with iron. Quassia is a pure bitter, but not an agreeable one. It is used sometimes in indigestion, but calumba has here mostly superseded it; in indigestion, accompanied with loss of power and irritability of the stomach, it may well be given along with either an acid or an alkali, according to the period of digestion. It is probably most useful as a tonic after prostrating illness, but even then it is better to combine it with a preparation of iron and an acid.

QUILLING.—A narrow border of lace or edging, plaited in such a manner that when done up it will resemble a row of quills; as, the *quilling* of a woman's cap. An instrument for doing up quilled edging is sold in the house-furnishing stores.

QUINCE.—There are many varieties of this excellent fruit, the most esteemed being the *apple*-quince, *pear*-quince, and *Portugal*-quince. The apple, or orange-quince as it is sometimes called, is the tenderest and has an excellent flavor; the Portugal quince is quite scarce; and the pear-quince is quite hard and tough, but is the most perfect in appearance, and has a flavor equal to any. In selecting, choose the large smooth ones; the small knotty ones are tough, worm-eaten, and wasteful. Quinces are in season from October to December. They may be kept for some time by wiping off the fur and laying them some distance from each other on a shelf in a cool dry closet. Quinces are never eaten raw, but they are cooked in a variety of ways. (*See* COMPOTES, JELLY, MARMALADE, PRESERVES, AND PUDDINGS.)

Cordial, (Quince.)—Select ripe and sound quinces, wipe off the fur, and grate them; put the pulp in a strong cloth and press out every drop of the juice; to each quart of this juice, add two-thirds of a quart of French brandy, a pound and a half of white sugar, a hundred bitter almonds or peach-kernels, and a dozen cloves; put it in a stone pot, cover it tight, and keep it a week in a warm place; then skim and bottle it, and let it remain a year before using it.

QUININE. — This is the most important constituent of cinchona bark, and has now almost entirely superseded the crude substance as a remedy. Pure quinine is not employed in medicine, being quite insoluble in water; but the sulphate takes its place. Sulphate of quinine is pure white and crystalline, the crystals being feathery; it possesses the curious property of fluorescence, *i. e.*, certain rays of light falling in a solution of quinine, though themselves invisible, cause the solution to yield light. The effects of quinine are manifold. Applied to the white corpuscles of the blood, and all bodies resembling them, it arrests their motion and apparently kills them; it also, within certain limits, arrests putrefaction even more powerfully than creosote. On the digestive tract quinine acts as do most other bitters; it gives rise to an increased flow of mucus, and to a small extent also that of the gastric juice. Especially will it be serviceable to arrest the putrefactive changes of food which has been retained in the stomach without being digested, thus giving rise to flatulence, acidity, etc. Quinine, after being swallowed, passes into the blood, and in great measure is evacuated by the kidneys, almost unchanged. The effect of quinine on the sense of hearing is peculiar. If taken in large doses, it speedily gives rise to noises in the head, singing in the ears, and sometimes deafness; sight, too, may become dim or even blindness for a time ensue: headache is also produced, frontal in site and severe in character; generally the pain is of a dull heavy kind, the face is flushed and hot, and the eyes suffused. These effects of large doses of quinine go by the name of *cinchonism.* Moreover, in large doses, quinine has the power of markedly reducing temperature; for this reason it has been largely given in acute rheumatism, pyæmia, and some forms of fever. Sometimes quinine in these cases has been given in enormous doses, 20 grains, frequently repeated, being not uncommon. It is true that in these cases the temperature has sometimes been reduced, but the patient has died all the same.

The most important use of quinine seems to be in malarious fevers, remittent or intermittent. The best plan of giving the remedy in these diseases is to wait for a remission, then to give a full dose, at least 5 or 10 grains, and keep up the effect by an hourly administration

of the remedy thereafter; 2 grains will generally suffice as a dose for this purpose, but to arrest the paroxysm it is best to give a much larger quantity. Certain forms of neuralgia, of a distinctly remittent type, are best treated by quinine. A large dose should be given just before the expected attack: 10 to 20 grains should suffice. Even ordinary neuralgias are frequently benefitted by doses of quinine given during an intermission. Quinine is commonly prescribed in most forms of convalescence from acute disease. It is then ordinarily given in a dose of 1 or 2 grains dissolved in water or orange wine by a few drops of dilute sulphuric acid. In this way it is of undoubted service.

QUINSY.—A common and troublesome affection, consisting of inflammation of the tonsils and adjacent parts of the fauces or back part of the mouth. It may occur at any age, but is most common in young people; and when once any one has been subject to it, it is very likely to recur on exposure to cold, so that some have an attack every year. Although painful at the time, no serious results need be feared. The *symptoms* of quinsy are a stiff and painful feeling in the throat after exposure to wet or cold; the tongue becomes furred and white; the appetite is bad; there are often headache and pains in the limbs; the temperature of the body rises rapidly, and all the symptoms of a fever come on. The tonsils enlarge, so that the act of swallowing is accomplished with difficulty, and the tonsils may be so large as almost to meet in the middle line and quite prevent any solid food being taken: at the same time there is swelling outside, just below the ear, which is painful when pressed. The enlarged tonsils may become full of pus and when they burst they discharge much matter, and at once afford decided relief. The febrile symptoms last four or five days, and then subside quickly; in most cases the inflammation goes away without the formation of any matter; generally, also, one side of the throat is more affected than the other.

Treatment.—The patient should at once go to bed, or at least keep in a room with a moist and warm atmosphere; any attempt to go out in the air only increases the malady, and makes the throat more sore than before. No solid food can be taken, and therefore beef tea, hot milk and soups must be given, and the thinner the fluid the more easily is it swallowed. Port wine is very valuable, and three or four glasses should be taken every day, and will be found to give great relief. Steam should be frequently inhaled by placing the mouth over a jug full of boiling water, but not over the mouth of a kettle, as the patient's mouth may be scalded. Gargles are of no use, as they do not go far enough back, and the effort of gargling is distressing to the patient. A hot bran or linseed-meal poultice should be placed round the throat at night, while during the day hot flannels should be worn. Sponging the outside of the throat with hot water will give great relief; the inside of the throat may be sponged with some astringent lotion, as tannic acid or iron and glycerine, by which it may be kept constantly moist. A mixture containing chlorate of potassa and bark is most useful in this affection, and it should be continued for some time until convalescence is established. Puncturing the tonsils with a small and narrow knife is very useful, even if it does not cause matter to escape. In some cases a leech or two behind or below the ear is useful, but blisters do no good. People who are liable to quinsy should be very careful to avoid, as far as possible, foggy and damp weather, as the disease is then very liable to recur. This affection might at first be mistaken for scarlet fever; but the fever lasts for a shorter time, and there is no rash, nor is it followed by dropsy or swelling of the glands. In diphtheria there is less fever, but much more prostration, while a membrane forms over the nostrils and a fatal result often happens.

R

RABBIT.—The "hare" of the Southern States, and the "rabbit" and "gray hare" of the Northern are the same animal. Rabbits are killed in immense numbers and are generally very plentiful in the markets from September to January, after which they begin to breed and are unfit to eat. They are in the best condition in November. The flesh of the rabbit, when over a year old, is dark, dry, and somewhat tough; the young, when nearly full grown and fat, are tender and rather delicate eating. A young rabbit has soft paws, which are not much opened; but an old one has them open, hard, and worn. The ears of a young one are very soft, while those of an old one are stiff and comparatively rough. A rabbit, like almost every other kind of game, has a better taste when a little "seasoned," or when the flesh is what is called "high"; but it must not be too much so. As long as the body is rather stiff it is good; but when limber, and when the flesh has a black-bluish appearance, it is necessary to examine it carefully, as it is probably tainted.

The *domestic* or *tame* rabbits are often found in the markets (both alive and dead), but they are unfit to eat unless they have been kept in a large place, well fed, free from any manure or dirt, and with plenty of room to burrow in a dry soil. When these conditions have been complied with, however, they are much superior to the wild rabbit, being more juicy and tender, and better flavored. They are best for the table when from three to twelve months old.

Baked Rabbit.—Clean and wash carefully, and place the rabbit in a baking-pan, with a few slices of onion and carrot; salt, pepper, and butter it; cover the bottom of the pan with cold water and set it in a quick oven; after ten or fifteen minutes, turn the rabbit over, baste and

Rabbit for Baking.

cover it with a piece of buttered paper; continue basting till done. When about half done, if the water and juice are boiling away, add more water or broth, and when done, turn the gravy over the rabbit through a strainer. Garnish with water-cress, and sprinkle a few drops of lemon-juice or vinegar over the top as it is sent to table.

Broiled Rabbit.—Select a young rabbit for this purpose, clean and wash carefully, cut off the head, slit it open all the way down the front, and lay it in salt and water with a plate over it to keep it down, for half an hour; then wipe dry, make eight or ten deep gashes across the thickest part of the back, and broil over a hot clear fire; turn the rabbit often, and when it is browned nicely on both sides, lay on a hot dish, salt and pepper well, and spread plenty of butter over it. Garnish with parsley.

This dish is improved, if, after the rabbit is dished and seasoned as directed above, it be set in the oven for five miuutes, and then anointed with a sauce made by heating two tablespoonfuls of vinegar and mixing with it a tablespoonful of made mustard.

Fricasseed Rabbit.—Select two young rabbits, clean them, cut into joints, throwing away the head and neck, and soak them an hour in salt and water; put into a sauce-pan with a pint of cold water; add half a pound of fat salt pork cup into slips, a bunch of sweet herbs, an onion minced fine, pepper, a pinch of nutmeg, and a pinch of mace; cover closely, and stew until tender. Take out the rabbits and set in a dish where they will keep warm; add to the gravy a teacupful of cream or milk, two well-beaten eggs stirred in gradually, and a tablespoonful of butter; thicken with a little flour wet in cold milk, boil up once, and remove the saucepan from the fire; squeeze in the juice of a lemon, stirring all the time, and turn over the rabbits.

Fried Rabbit.—Young rabbits only are fit for frying. Clean, cut into joints, and soak in salt and water for an hour; then dip in beaten egg, roll in cracker crumbs, and fry to a nice brown in plenty of lard or dripping. Serve with onion sauce.

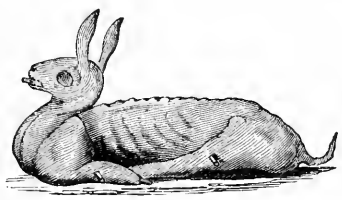
Larded Rabbit.—Clean, cut into joints (leaving out the head and neck), lard with slips of fat pork (*see* LARDING), and fry till about half done. Have ready some strained veal or beef gravy, put it with the rabbit into a sauce-pan; add a minced onion, a bunch of sweet herbs, and pepper; cover closely, and stew half an hour, or until tender. Take out the rabbits and lay in a hot covered dish; strain the gravy, add a tablespoonful of butter, and the juice of a lemon, and thicken with flour; boil up well, and pour over the rabbit.

Pie, (Rabbit.)—Make as directed for Pigeon Pie.

Roast Rabbit.—Clean, and lay in salt and water for an hour. Make a stuffing of bread-crumbs, minced beef-suet, lemon-peel, grated nutmeg, pepper and salt, and any sweet herb that may be liked; stuff the rabbit with this, sew it up, and skewer it into proper form.

Rabbit for Boiling.

Rub the outside of the rabbit over with butter, flour it slightly, and roast, basting often. It ought to be done in from forty-five minutes to an hour. Make a gravy with a small piece of beef, or the livers of the rabbits if they were not roasted inside, a whole onion, some whole peppercorns, a blade of mace, a clove or two, and a small crust of bread toasted very dry and brown, but not burnt; when the gravy has



Rabbit for Roasting.

boiled enough, *strain* it, add a little catsup and flour mixed together, boil up once, and serve in a tureen. If the gravy is liked very rich, a wineglassful of port wine may be added.

Stewed Rabbit.—**I.** Clean, cut off the head, and soak in salt water for an hour; then put into a saucepan, pour on enough cold water to cover them, add a little salt, and stew until tender. Slice in another pot three or four onions, and boil in a little water until thoroughly done; drain off the water, and stir the onions into a gill of drawn butter, pepper to taste, and when it simmers, add the juice of a lemon. Dish the rabbit, pour the hot sauce over it, and set in a warm place, closely covered, for five minutes before sending to table.

II. Clean, cut into joints, and fry in three ounces of butter until they are turning rather brown; then take out the rabbit, and add to the gravy a small carrot and two or three onions, sliced, a few slices of turnip, half a dozen sprigs of parsley, two of celery, and one of thyme (the last tied together with a string),

salt and pepper, two or three cloves, and half a pint of sherry or madeira wine, cover the whole with broth or water, and boil till half done; then add the rabbit, and continue boiling gently till the whole is done, stirring now and then. Dish the rabbit; mash the onions, carrot, and turnip through a colander; and put them all around the pieces of rabbit; strain the gravy over the whole, and serve warm.

RACCOON.—This animal is more frequently seen on the table at the South than in other parts of the country, but it occasionally makes its appearance in our markets, sometimes in a live state. It is in season during the fall and winter months. The full-grown raccoon weighs from seven to twelve pounds, and its flesh is both rank and tough; the young are better, but even these are not good if very fat. Prepare, cook, and serve as directed for OPOSSUM.

RADISH.—The radish is supposed to be a native of China, but has long been cultivated here. It contains little else than water, woody fibre, and an acid substance which resides in the external part; it cannot, therefore, be very nutritive, but it is an agreeable relish and stimulant. There are various varieties of radishes, but they are generally divided into the *turnip*, or round, and the *spindle-rooted*. Many are forced for the early market, and they are one of the first vegetables to make their appearance in the spring. Their season commences in April, and continues with a succession of crops till cold weather; the black Spanish and other winter varieties can be buried in dry sand for the winter's use, and in fact can be kept till the new radishes appear. The young seedling leaves of the radish are sometimes used as a salad; the seed-pods also, when green, are often pickled along with string-beans. The color of radishes varies greatly; passing from white to red, and through every shade to a dark purple, approaching to black. They will grow in almost any soil, but they flourish best and attain a larger size in a deep, sandy soil. The seeds should be sown in rows about a foot apart, as soon as the frost is out of the ground; or they may be started in a hot-bed and transplanted to the garden. Of the early turnip-shaped varieties, the *scarlet*, *olive-shaped*, and the *white turnip-rooted* are the best. The *long scarlet short top*, and the *long white Naples* are the most desirable of the long-rooted sorts. The *rose-colored Chinese* is good for winter forcing.

RAIL.—There are several varieties of this excellent little bird, but none of them are very abundant in the Northern markets. The *clapper-rail*, or *meadow-hen*, is the most plentiful, and though inferior to the sora, is very tender and well-flavored when in good condition. It is best in September and October. The *sora*, or *Carolina rail*, is seldom seen for sale, although it is much sought after. Its flesh is of an exceedingly delicate flavor, unsurpassed in quality by that of woodcock. It is in best condition in September. The *Virginia* rail, or *little mud-hen*, is occasionally found in the markets in April and May, and again in September and October. It is considered best in the latter months, but its flesh is not very delicate, at any time. Prepare, cook, and serve rails as directed for ORTOLANS.

RAISINS.—These are merely grapes dried in the sun, or by stove-heat. The former, called *sun-dried raisins*, are the most highly prized; but many sold as such are not dried entirely without the aid of artificial heat. The Malaga, or "muscatel," which comes from Spain, is the best raisin for table use. The Sultana, without seed, and the Smyrna are also choice varieties. The common raisins are made from ordinary grapes with little care; they have an acid taste, which is much less agreeable than the flavor of the choicer kinds, and they are often mixed with a great quantity of refuse matter and dirt. Raisins are in season throughout the year, but are best from January to June, when they are fresh. In buying, take the small boxes, as raisins lose quality by keeping.

Wine of Raisins.—First boil the water which is to be used for the wine, and let it again become perfectly cold; then put into a sound sweet cask eight pounds of fine Malaga raisins for each gallon that is to be used, taking out only the quite large stalks; the fruit and water may be put in alternately until the cask is *full*, the raisins being well pressed down in it; lay the bung lightly over, stir the wine every day or two, and keep it full by the addition of water that has, like the first, been boiled, but which must always be quite cold when it is used. So soon as the fermentation has entirely ceased, which may be in from six to seven weeks, press in the bung, and leave the wine untouched for twelve months; draw it off then into a clean cask, and fine it, if necessary, with isinglass, tied in a muslin and suspended in it.

RAPE.—A plant of the cabbage species, with fleshy stem and leaves, which are sometimes used in the same manner as spinach, in salads, etc. It is hardly fit to use until touched by frost. The taste is warm and aromatic; but it is not cultivated in this country to any considerable extent, and consequently is seldom obtainable in the markets. The chief value of the plant lies in the oil which is expressed abundantly from the seed, and extensively used in lamps and machinery.

RASH.—There are several rashes to which young children are subject. The most common one is the red gum. (*See* RED GUM.) Another rash is one which sometimes leads parents to dread the accession of measles or scarlet fever. It is a red blush, most observable on the extremities, but attended with little fever. Measles is preceded by running from the nose and a peculiar cough, and scarlet fever by sore throat, and the absence of these symptoms from the rash now mentioned generally points out its real nature. Another rash, presenting dull, red patches, chiefly on the legs, with here and there small swellings, is also sometimes seen. All these rashes are of course mere symptoms, and, ex-

cept in the case of red gum, require no special treatment. (*See* NETTLE RASH.)

RASPBERRY.—This is one of the best of fruits for the dessert, especially the choicer varieties, among which are the red and the yellow, or white, the Antwerp, the Franconia, the Fastolff, etc., which ripen from the 5th to the 10th of July. The common red raspberry ripens a little earlier; and the black-cap, or common black raspberry, which is the original variety of the fruit, ripens later and lasts about six weeks. During favorable seasons raspberries are found in the markets from about the middle of June to the middle of August. The fruit is sub-acid and cooling. Its flavor is extremely volatile, and if the fruit is kept for two or three days, will be almost entirely gone.

Brandy (Raspberry).—To one gallon of brandy, allow two quarts of raspberries; bruise them in a little of the brandy and add them to the rest; let them steep, covered closely, for ten or twelve days; then strain through a seive and put to the liquor three-quarters of a pound of white sugar; when it is fine, bottle it.

Vinegar (Raspberry).—Take red or black raspberries, 5 qts. for three successive days; best cider vinegar, 5 qts.; crushed sugar 1 lb. to every pint of juice.

In the morning put five pounds of raspberries and all of the vinegar in a four gallon crock; the next morning put five pounds of fresh fruit in another crock the same size; tie a strainer over it drooping several inches; empty the first crock into the strainer and drain, leave untouched until the next morning, when the drained fruit is thrown away and the process repeated; this brings you to the fourth day; then tie the strainer over the empty, clean crock, pour in the raspberries and let them drain until the next day. Measure the liquid and add an equal quantity of vinegar; put it in the preserving kettle and let it simmer; skim and while hot *fill* the bottles, cork and seal them; have the corks soaking in hot water when the vinegar is simmering. Pound the cork well in, holding the bottle wrapped in a towel, in the hand. Cut the cork *even with the top* of the bottle, turn it upside down and give it a turn or two in melted cement. This syrup will keep for years and makes a most delicious drink.

Wine (Raspberry).—Make as directed for red currant wine; but, as the fermentation subsides, add a small quantity of the pure juice of the raspberries, or suspend some fresh fruit in the cask, and the flavor of the wine will be greatly improved.

RATS, To Destroy.—The methods suggested for destroying mice also apply to rats. (*See* MICE).

RATAFIA. (*See* LIQUEURS.)

RAY can rarely be had except at one or two stands in Washington Market, New York. It is very large, and the parts sold are only the fleshy side-fins. The flesh is rather tough, glutinous, and somewhat insipid in taste; but it improves with keeping. The following receipt for cooking it is French:

To Cook.—Clean the fish, put it in a pot, cover with cold water, and boil till tender; then dish it, and sprinkle it with salt and pepper. While it is boiling, put about two ounces of

butter to each pound of fish in a frying-pan, set it on a quick fire, stir now and then, and when brown, throw into it about six sprigs of parsley, and take them off immediately with a skimmer; as soon as the parsley is taken off, pour the butter over the fish quickly, put two tablespoonfuls of vinegar in the frying-pan while on the fire, give one boil, and pour also over the fish; then send at once to table. Frying the parsley and boiling the vinegar cannot be done too fast, as the fish must be served hot.

RAZOR. (*See* SHAVING.)

RECEIPT.—A receipt is a written acknowledgment that money or some other thing has been received from another person.

When an account or bill (see BILL) is paid it is customary for the creditor to write the words "Received Payment" with the date, beneath the items, and affix his signature, which gives to the account or bill the character of a receipt.

A receipt in *full* may be in the following form:

"Received, New York, May 1, 1876, of John "Doe, fifty $\frac{75}{100}$ (50.$\frac{75}{100}$) dollars in full of all "demands to this date. RICHARD ROE."

A receipt, although expressed to be in full of all demands, is not conclusive evidence of the facts attested by it. If obtained through fraud, accident or mistake, or without the article having actually been delivered, it will not prevent the person giving it from suing for the article. (*See* BILL and LAW).

RED GUM.—A simple and harmless skin eruption which occurs in infants within the first year of life, from hot rooms and bedding, hard under clothing, new flannel, all sorts of local irritation, and in the mildest feverish diseases. The rash is best marked on the back, as a profusion of minute red splotches, attended by a trifling itching; sometimes it may come out all over the body.

Treatment:—Very simple diet, consisting of milk, or milk and lime-water, without thickening the food at all. A little rhubarb and magnesia to act as a gentle purgative, and bathing in tepid water. Should the rash not yield to this, apply zinc ointment.

REED-BIRDS.—These excellent little birds

are usually brought to market dead, and picked and strung together in bunches like peppers. They are most abundant in the Philadelphia markets, Philadelphia being near their feeding grounds. They are commonly known there as reed-birds, but in the Charleston and Savanah markets, where they are also abundant, they are called *rice-birds*. They are in best condition for the table in September and October. Prepare, cook, and serve as directed for ORTOLANS.

REFRIGERANTS.—These are what are commonly called cooling medicines; also sometimes *febrifuges;* they include such saline and acid substances as are popularly regarded of utility in diminishing febrile action. Refrigerants are of at least two kinds, those which have probably the power to diminish temperature, and those which seem only to allay thirst. Acid fruits seem only to possess refrigerant powers by allaying thirst, for a dry parched mouth is one of the most prominent indications of fever, and this being relieved there is often a belief that the bodily temperature is actually lessened.

(*a*) Carbonate of soda or potass, 20 grains; sweet spirits of nitre, 30 drops; syrup of orange-peel, 1 drachm; water, 1 oz. Mix and give with 15 grains of citric or carbonic acid, or a table-spoonful of lemon juice, while effervescing. (This is the common medical effervescing draught.)

(*b*) Nitrate of potass, 1 drachm; sweet spirits of nitre, 3 drachms; tincture of henbane, 2 drachms; liquor of acetate of ammonia, 1 ounce; camphor mixture, enough to fill up an 8 ounce phial. Give two tablespoonfuls every four hours. (A good common febrifuge mixture.) If cough is present, add ten or fifteen drops of ipecacuanha wine to each dose.

REGISTER. (*See* WARMING.)

RENNET.—A substance used in coagulating the milk in making cheese (*see* CHEESE). To understand its operation we may observe that it is the nature of the gastric juice secreted in the stomach of all animals to coagulate the milk taken into it, as is well known to those accustomed to young children. The prepared stomach of ruminating animals is found best for this purpose, and that of a young calf that has been killed before the the digestion is completed is generally preferred for rennet. To prepare, wash the bag (or stomach) clean, and salt it thoroughly inside and out, leaving a coat of salt over every part of it; put it into an earthen jar or other vessel, and let it stand three or four days, in which time it will have formed the salt and its own natural juice into a pickle; take it out of the jar, hang it up for two or three days, and let the pickle drain from it; re-salt it, and place it again in the jar; cover the top of the jar with a paper pierced full of pin-holes. It ought to remain in this state twelve months undisturbed; but it *may* be used a few days after it has received the second salting.

When wanted for use, soak the rennet in water, to which a little lemon and cloves may be added to do away with any disagreable smell. The strength of the liquid will of course be in proportion to the length of time the bag remains in it.

REP.—A thick, twilled, and durable cloth extensively used in furniture, especially for window-curtains and for covering chairs, sofas, etc. It is made of worsted or silk, or of worsted and silk combined, and in various colors. The silk rep is a very rich fabric, but is less durable than the worsted, which is scarcely inferior in appearance when of good quality. The mixed fabric is undesirable. Rep is manufactured in pieces a yard, and sometimes two yards wide.

RESIN.—Resins are solid substances of vegetable origin, highly inflammable, giving much soot by combustion, insoluble in water, but soluble in essential oils and in alcohol. The resin of commerce is the natural product of the pine; and immense quantities of it are made in the Southern States, especially in North Carolina. It is to this that reference is made whenever resin is mentioned in any of the receipts in this book.

To remove the taste of Resin from New Tin.—Take a hot live coal from a wood fire, or a piece of burning charcoal, put the coal into a tin vessel, and shake it about awhile. Repeat this, if necessary, with a fresh coal each time; then wash out the vessel with boiling water. *Or*, boil in the vessel some potash dissolved in water; afterwards wash out the vessel, and boil pure water in it.

RESPIRATION.—The process by which the air enters and emerges from the lungs, and in doing so causes the aëration of the blood, converting the black venous blood into the red arterial blood. Respiration consists of two parts, inspiration and expiration, and as a rule an individual breathes fifteen times a minute. The lungs always contain air, and no expiratory effort, however forced, can empty them; this air which cannot be got rid of is called the Residual air, and is on the average from 75 to 100 cubic inches. About as much room in addition to this remains in the chest after an ordinary expiration, and is called Supplemental air. In ordinary breathing, from 20 to 30 cubic inches of air pass in and out of the chest—this is called the Tidal air; thus at the end of an ordinary inspiration, about 230 cubic inches of air are contained in the lungs; in addition, by taking a very deep inspiration, another 100 cubic inches, called Complemental air, may be added. Of these 230 cubic inches, about one seventh goes out at every expiration and is taken in again at the next inspiration, and so on; from this it will be seen that it is highly important that the air in a room should be constantly renewed, for otherwise the occupants will be breathing over again their expired air, which is very injurious (*see* AIR). The mechanism of respiration need not be fully described here. During inspiration the diaphragm descends, and the depth of the chest from above downwards is thereby increased; at the same

time the ribs run upwards and outwards, so as to increase the cavity of the chest from side to side, and from front to back. Thus the chest-walls expand in three directions during inspiration, and at the same time the lungs follow the expansion and become inflated with air. During expiration, the lungs being elastic, retract, and the reverse movement of the diaphragm and chest-walls takes place. Anything, such as tight-lacing, which interferes with the due expansion of the chest, is therefore very injurious; any deformity of the chest, a habit of stooping, a curved spine, a pigeon breast, these all have the effect of diminishing the breathing area of the lungs. As a rule, the broader and fuller the chest, the better is the health, and the greater is the capacity for exertion. Gymnastics, drilling, rowing, etc., are all excellent means of expanding the chest and promoting good respiration. For methods of artificial respiration, *see* DROWNED.

RESPIRATOR.—An instrument worn on the mouth by those who wish to avoid exposure of the lungs to the night air, in cases of consumption, winter cough, etc. In this way warmer air is conveyed into the lungs, thus preventing the irritation of the wind-pipe which provokes the cough. There are several patent respirators, but a handkerchief will serve all practical purposes.

RHEIM'S PAPER.—Make a strong tincture of capsicum-pods (red peppers) by steeping them for several days, in a warm place, in twice their weight of rectified spirits of wine. Dissolve gum-arabic in water to about the consistency of molasses; stir equal quantities together with a small brush or large camel's hair pencil; take sheets of good tissue-paper, coat them with the mixture; let them dry, and then coat again; let that dry, and if the surface is shining, there is enough of the peppered gum; if not, give a third coat. This paper, applied in the same way as court-plaster to chilblains not broken, and burns not blistered, speedily relieves and cures them. It is good for cuts and discolored bruises; and allays rheumatic pains. It keeps long.

RHEUMATISM is now considered a slight inflammation of the sheaths of the muscles, and though its treatment somewhat corresponds to that of the severer disease, called ACUTE RHEUMATISM or RHEUMATIC FEVER, it is a comparatively trifling disorder. It indicates itself by dull pains, not unlike toothache, in various muscles, frequently in the lumbar muscles, the small of the back, when it is known as *Lumbago*. Allcock's porous plaster, or Rheim's paper, is apt to stop it. Internally, take, every hour or two, a swallow from a glass of water in which has been dissolved a tablespoonful of Rochelle salts.

Acute Rheumatism is characterized by high temperature, profuse sour sweats, and swelling and reddening of some of the larger joints, most frequently of the knee and ankle. These are intensely painful, but generally get well by themselves. Rheumatic fever most frequently arises from cold and damp, especially if the individual has suffered from fatigue, improper food, and the like. It begins with restlessness and fever, with white or creamy tongue, and bowels either constipated or relaxed. Presently the joints begin to ache, the pain increases till there is swelling and great tenderness all over one or more of the large joints of the body; the hip joint, however, is not very often affected. There is by this time, in most cases, a high temperature, 102° or 103° F., but it gradually increases, and in many cases becomes excessive. This, indeed, constitutes one of the chief changes of the disease, for when the temperature rises above 105° there is always more or less danger to the patient; by the time 108° is reached recovery is as nearly as possible hopeless, and at 109° may be said to be quite so. In those cases where a high temperature developes itself, the sweat, which is ordinarily very profuse and of a strong acid odor, disappears, and its reappearance may be said to be the first sign of real improvement. The pain and tenderness in the joints, too, are very great. The patient can hardly bear the weight of the bed-clothes, much less can he bear the swollen limbs to be touched; he himself dare not move, and he even dreads the movements of others. The pulse is quick and full, and, except the heart be affected, regular. The thirst is extreme; and the urine is high-colored and full of a brickdust sediment. It is difficult to say, too, when the patient has seen the worst, for joint after joint may be affected, and even when the patient seems fairly on the road to recovery he may suffer a relapse. But the great risk of rheumatic fever is the danger of heart complication. Most cases of heart disease do, in fact, date their onset from an attack of rheumatism.

Treatment.—Get a good doctor, if possible. Bicarbonate of potash may be given, either by itself, or effervescing with citric acid, in large doses—30 grains or so every four hours, continuing it until the pain begins to abate and the urine is rendered alkaline. The joints ought at the same time to be wrapped in cotton-wool, but in some cases great benefit is derived from applying warm alkaline lotions (an ounce of bicarbonate of potash to a pint of water) to the skin, and putting cotton-wool over that. Woollen clothing or cloths should also be worn next the skin, but should not be allowed to remain too long. Lemon juice is also believed to be an efficient remedy. The diet should be light,—beef-tea, and the like. As the patient improves, fish may be given, but too early use of meat may bring on a fresh attack. The patient should have plenty of drink; common lemonade is best, or soda or potass water may be given. Wine is forbidden, and above all things, beer. In convalescence, give quinine or bark and ammonia, afterwards iron and cod-liver oil.

Chronic Rheumatism is quite a different affection from rheumatic fever, for though the

latter may pass into the chronic stage, most frequently the one is quiteindependent of the other. Most old people, especially if they have led a life of exposure and fatigue, are more or less affected with rheumatism, sometimes so far as to completely cripple them. The constitutional disturbance is slight, but the pain is sometimes great, both night and day, so as to wear out the patient by continual harassing. Medicines are of little effect in this form of rheumatism, and their use can only be ventured upon by the physicians acquainted with the particular case. Iodine paint to the affected joints sometimes does good, but not so much as hot alkaline lotions. All patients should wear flannel next the skin, and be careful in their diet. Beer, porter, and full-bodied wines must not be indulged in.

RHINE WINES.—The wines of the Rhine form a class different from all others. Some of the lighter kinds bear a considerable resemblance to the vins de Graves; but they are, in general, dryer than any French wines. They are generous, finely flavored, and characterized by a delicate aroma that is peculiar to them. Though they do not contain much alcohol, yet from the completeness of their fermentation they will keep longer (continuing to improve with age) than the potent wines of the South with double their alcoholic strength. From a peculiar tartness which they possess it has been thought that these wines are acid, and the inferior kinds no doubt are to a certain degree; but this is by no means a constant character of Rhine wines, many of which have not, in good years, any perceptible acidity to the taste. The most celebrated of these wines are fermented in casks, by which the fine aroma is preserved, and then, after being repeatedly racked (*see* WINES), are kept for years in very large vessels to mellow. When in market, the time for racking is past.

The first of the Rhenish wines for fine flavor and absence of acidity is the *Johannisberger*, produced on the south side of a hill of that name, a little below Maintz. The choicest of all is called *Schloss Johannisberg*, from a vineyard now the property of Prince Metternich. Little of this ever comes into the market; but other vineyards in Johannisberg give wines of the first class. The produce of the *Stienberger* vineyard is considered next in rank; it is strong, with much sweetness and delicacy of flavor. *Rudesheim and Græfenberg* are also among the first of these wines. Of second quality are those of *Marcobrunner, Roth, and Konisbach*, etc. Perhaps the best of the cheaper wines to be procured in this country is the *Niersteiner*. Old *Hock*, though generous and durable, is considered less heating, and at the same time more exhilarating than many other wines. (*See* HOCK and WINE.)

Rhine wines of little bouquet may be drunk iced; though, in the usual place of the lighter kinds, with raw oysters before dinner, they should be of the temperature of the room.

RHODODENDRON.—This highly ornamental plant grows wild in the Middle States, but has been greatly improved by cultivation, and is now one of the most beautiful of the smaller shrubs. They should be planted in a bed specially prepared, where they can be sheltered from the winter's sun. The proper soil is peat, leaf-mould, and sand, in the proportion of one part of the latter to four of the former. They are perfectly hardy, and will yield their large, brilliant clusters of flowers year after year with little attention except keeping the soil in proper condition.

The varieties are very numerous, and we can mention only a few of the more desirable:—*R. Archimedes*, bright rose, light centre; *R. Atrosanguineum*, intense blood red, fine foliage; *R. Barclayanum*, deep rose, fine foliage; *R. Blandyanum*, deep crimson; *R. Bryanum*, rosy scarlet, light-centre, fine foliage; *R. Chancellor*, spotted purplish lilac; *R. Corregio*, dark crimson; *R. Delicatissimum*, white, edged with pink; *R. Duc de Brabant*, yellowish white, spotted with red, semi-double; *R. Everestianum*, rosy lilac, spotted and fringed; *R. Giganteum*, bright-rose, good foliage; *R. Leopardy*, rosy-lilac, intensely spotted; *R. Nero*, dark rosy purple, spotted; *R. Roseum elegans*, fine rose; *R. Superbum*, rose, late-blooming; *R. Grandiflorum*, the same.

RHUBARB.—This is one of the most wholesome of all the productions of the garden that are used in pies, puddings, etc. It was comparatively little known until within the past twenty or thirty years, but it is now cultivated in almost every garden. The part used is the footstalks of the leaves, which are peeled and cut into small pieces for cooking. When quite young they are much better not peeled. The leaves are considered poisonous, and eaten in any considerable quantity may prove fatal. Among the many varieties, the *Giant* and *Victoria* are generally preferred, as they produce the largest, finest, and most succulent stalks. Rhubarb is in season from April until September. The stalks may be dried in the sun, and will then keep a long time; they shrink a great deal and become like dry soft wood, but if soaked over night before using swell out to their original dimensions, with little loss of flavor. Rhubarb is used in the preparation of many wholesome and delicious articles of food. (*See* JELLY, PIES, PRESERVES, PUDDINGS, and TARTS.) It is often called Pie-Plant.

Rhubarb, as employed in medicine, consists of the roots of several plants growing in Central Asia. The medicinal preparations from it are an extract, an infusion, a syrup, tincture and wine, with a compound pill, and a compound powder. The compound pill, which is the pill in most general use as a laxative, contains rhubarb, aloes, myrrh, hard soap, and oil of peppermint. It is a most useful preparation. The compound powder, better known perhaps as Gregory's powder, consists of rhubarb, magnesia, and ginger; it is a great and deserved favorite in the nursery. In small doses, rhubarb acts as a kind of tonic to the stomach and

bowels, in larger doses it is purgative, but is apt to be followed by constipation, as it has a kind of astringent effect subsequent to its purgative action. On this account, rhubarb, especially in the form of wine or tincture, is often prescribed in the early stage of diarrhœa, in order that it may carry off any irritant substances giving rise to the diarrhœa, and subsequently arrest the too violent action of the irritated bowel. Children are apt to eat things which disagree with them, producing diarrhœa and the like; in such cases Gregory's powder is an invaluable remedy. The purgative dose of rhubarb is 20 to 30 grains.

RICE.—There are very many varieties of rice, but the only kind used in this country, and the best produced anywhere, is what is known as the *Carolina rice*. Though a larger portion of the earth's population subsist upon it than upon all the other seeds combined, rice is by no means equal to wheat in its nutritive properties, since it consists almost exclusively of starch, and is relatively deficient in nitrogenous elements. New rice is much inferior in quality to old, and is liable to produce indigestion, diarrhœa, and rheumatism. It should not be eaten for at least six months after it has been gathered; the seeds are then very dry and hard, and have a yellowish tinge, while the new rice is perfectly white.

Rice Flour, or ground rice, is made of broken rice, well dried and ground to different degrees of fineness. It is ground, generally, somewhat roughly, so that the grains are perceptible and impart a rough and dry taste to the food. Ground rice is not necessarily of the best quality, but its value is determined by its color and thickening properties. Both rice and rice-flour are prepared for the table in many ways. (*See* BREAD, CAKE, CROQUETTES, GRUEL, PUDDINGS, SOUPS, etc.)

Boiled Rice.—Pick out all the unhusked or defective grains from a pint of rice, and wash it in plenty of cold water; put it into a porcelain-lined stew-pan, pour to it three quarts of boiling water, add half a teaspoonful of salt, and boil it just *seventeen* minutes from the time it begins to boil; then drain off all the water and set the rice over a moderate fire to steam fifteen minutes with the lid off.

Or, clean the rice as above, put to it three quarts of cold water and a teaspoonful of salt; set it on the fire and boil it fifteen to twenty minutes; then drain off the water, add a little milk and cream, and let it boil a few minutes longer. It should not be so soft that the grains lose their form.

Fried Rice.—Boil the rice quite soft the day before, so that it will adhere together well. Next morning cut it in slices an inch thick, and cook it on a griddle with enough lard to fry brown. This is an excellent breakfast dish. Cold rice left over from dinner may be used in this way.

Water (Rice).—This is a very useful beverage in the sick-room. Boil half an ounce of rice in a quart of water till it is quite soft; then strain the water off through a coarse sieve.

RICE-BIRD. (*See* REED-BIRDS.)

RICKETS.—1. A name given to a constitutional disease characterized by an unhealthy state of the system, which precedes for several weeks or months a peculiar disease of the bones, and of some other organs of the body; there is curvature of the bones of the arms and legs and enlargement of their extremities. The disease is found chiefly among the children of the poor and is produced by improper or deficient diet, impure air, want of cleanliness and sunlight; cold, moisture, and deficient clothing.

At first the most ordinary symptoms are diarrhœa alternating with constipation, enlargement of the abdomen, and more or less of emaciation. The child is dull, languid and peevish; the appetite is bad and the sleep disturbed at night; if it tries to walk it falls; it is thirsty and will drink a great deal of water; it has pain in the bones; a pale face and a flabby skin; the hair on the head is thin and the veins marble the surface by their prominence; the fontanelle remains open. In the next stage three symptoms are chiefly noticeable: 1. A profuse sweating of the head and neck and upper part of the chest; this sweating is worse at night, when beads of perspiration may be seen on the head while the lower part of the body is dry and hot. 2. There is a desire on the part of the child to kick off the clothes, as if with a wish to be cool. 3. There is general tenderness, so that the child cries when moved about. The urine is thick and deposits a pale sediment on cooling. The next set of symptoms are those connected with the deformity of the skeleton. These deformities are numerous, and need not be specially mentioned here. Death results in very few cases, with the exception of those in which the peculiar softening of the bones extends to the skull. In these cases the brain is liable to suffer, convulsions are very frequent, and the child may die with the symptoms of water on the brain. In those rickety children who recover and grow up to adult life the deformity remains to a certain extent; the general health, however, may not suffer at all in after life. In fact, rickety persons will frequently show an unusual amount of physical strength and intellectual capacity in advanced years. They are, however, mostly under size. Many of the dwarfs are examples of recovery from rickets.

Treatment.—Improvement of the general health is the first thing to be aimed at. The child should be placed in a warm and dry atmosphere, with good ventilation and pure air. The diet is most important and should be in accordance with the rules laid down in the articles on INFANTS and CHILDREN, adapting it of course to the age of the patient. On fine days the child should be wrapped up warm and carried out into the open air. It should sleep alone, and the bed-clothes should be kept dry and clean. A warm salt-water bath should be given every morning if the child can bear it. Steel wine or the syrup of the phosphate of iron, either alone, or in conjunction with cod-liver oil, are very valuable remedies. Change

of air such as a visit to the seaside, may bring about excellent results, if the patient can afford it. Cod-liver oil should be given after a meal. Raw meat, pounded in a mortar, is a good thing; milk must form one of the principal articles of food. It ought to be given in conjunction with barley-water or oat-meal gruel. Lime-water may be mixed with the milk if the latter curdles on the stomach.

RINGWORM.—An eruption in the form of a circle, or part of a circle, which occurs on the face, head, shoulders, or neck, and sometimes even on the lower parts of the body. Two eruptions are popularly confounded under this name. One of them (*herpes circinatus*) is arranged in smooth shining rings of a red color, with a center of sound skin, and occurs chiefly on the face; this is not contagious, and does not cause loss of the hair. The other (*porrigo scutulata*) appears chiefly on the scalp, but sometimes on the forehead and neck, the ringworm appearance being presented only in its early stage. It is a parasitic disease, highly contagious, and the rings consist of minute pustules which are of a paler red color than the first kind; in the center is a patch of skin not very different in appearance from the surrounding healthy parts, but also found, on close examination, to be covered with small pustules. The hair ultimately falls off from the spot, leaving a shining bald patch.

Treatment.—The treatment of the two kinds of ringworm is quite different, the first merely requiring the application of any astringent, such as common ink or blue stone, or a solution of nitrate of silver, or, better still, of chloride of zinc (two grains of either of the two last to an ounce of distilled water). In treating the other kind (*porrigo scutulata*) the first thing to be done is to cut off the hair and loosen the scabs, so that the application can reach the skin itself; a large linseed-meal poultice will accomplish this. Then apply an ointment composed of 16 grains of iodide of mercury and 1 ounce of lard; let it remain on twenty-four hours, then work it off with yellow soap, and apply the ointment again. Repeat this every day, using iodide of sulphur, made of half the above strength, on alternate days, if the mercury causes too much irritation, in which case also a poultice of linseed-meal may be applied over it. Usually, however, the mercury acts like magic, and reduces the disease to a mere scurf. But this must not be considered as a cure until the skin is sound and the hair comes out again, as it will always do in the course of time. When there is nothing but a little scurf remaining, a wash composed as follows may be used instead of the ointment:—Take of chloride of zinc 10 or 12 grains; glycerine, 2 ounces; rose-water, 6 ounces; mix. If the general health is reduced, it must be supported by good living and tonics, or local remedies will be useless.

ROACHES, To Destroy.—Roaches, cockroaches, or croton-bugs, as they are variously called, are a troublesome kind of household vermin which frequent sinks, water-closets, and other places where water is constantly kept. They breed with prodigious rapidity, and unless exterminated or driven off, will soon swarm all over the house, penetrating into everything, even the beds. Prevention in the case of roaches is better than cure, and as soon as any of them are seen, powdered borax, or Persian insect powder, or arsenic, should be sprinkled around the spots they seem to frequent, and they should also be scalded out twice a week. Hellebore, rubbed over with molasses, and put round their resorts is also a very effectual poison for them.

ROASTING.—As it is usually practiced, roasting is fixing meat upon a spit, or suspending it before a fire, and causing it to move round; but this motion is not essential to the process of roasting. It is sufficient that all sides of the meat should be, by some means or other, exposed to the radiant heat of a fire, while, at the same time, a current of air passing over the meat carries off all the steam and other volatile substances that are raised by the process. This species of cookery is therefore divided into roasting before an open fire, and roasting by enclosing the meat in a heated vessel, furnished with a contrivance by which hot air can enter and pass out again. We should add, however, that in many contrivances for cooking, merely enclosing the meat in a heated part of an apparatus, without any current of air passing through it, is improperly termed roasting; it is only *baking*. The first change undergone by the meat in roasting is the melting of the fat exposed to the heat of the fire, while at the same time the watery fluids on the external part are converted into vapor; but as the heat penetrates deeper into the meat, the juices undergo important alterations. The change takes place first on the outside, and it requires a considerable time before the heat can penetrate completely to the centre of the meat; but it does so at last, and the steam which is formed in consequence, coming from the interior and bursting out upon the surface, breaks and rends the fibres of the meat, loosens their texture all through the mass, and permits some of the gravy to come out and fall into the dripping-pan along with the melted fat. As the loss of this would render the meat less savory, it is continually returned upon the joint seasoned with a little salt, a process known as *basting*, without which a good roast cannot be effected. When the meat is about half done, the intense heat begins to carbonize the outside, so as to form a kind of crust, which is prevented from increasing too much by turning round, and managing properly the heat of the fire, and by repeating the basting sufficiently often. Dredging a little flour over the meat to produce a froth is the last part of the process. The dripping-pan should be carefully protected from coal or ashes falling into it.

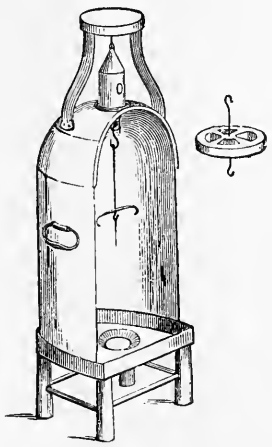
When meat is very lean, a slice of butter, or a small quantity of clarified dripping, should be melted in the pan to baste it with at first; though the use of the latter should be scrupu-

lously avoided for poultry, or any delicate meats, as it imparts a flavor which is to many persons peculiarly objectionable. Let the spit be kept bright and clean, and wipe it before the meat is put on; balance the joint well upon it, that it may turn steadily, and if necessary secure it with skewers. A cradle-spit which is so constructed that it contains the meat in a sort of framework instead of passing through it, may be often very advantageously used instead of an ordinary one, as the perforation of the meat by the latter must always occasion some escape of the juices; and it is, moreover, particularly to be objected to in roasting joints or poultry that have been boned and filled with stuffing. The cradle-spit is much better suited to these, as well as to a sucking pig, sturgeon, salmon, and other large fish; but it is seldom

Cradle Spit.

to be found in our kitchens, most of which are singularly deficient in the conveniences which assist the labors of the cook.

For heavy and substantial joints, a quarter of an hour is generally allowed for every pound of meat; and with a good fire and frequent basting will be found sufficient when the process is conducted in the usual manner. Pork, veal, and lamb should always be well roasted; but beef and mutton are generally preferred rather underdone. Joints which are thin in proportion to their weight require less time to roast than thick and solid ones. Ribs of beef, for example, will be sooner ready to serve than

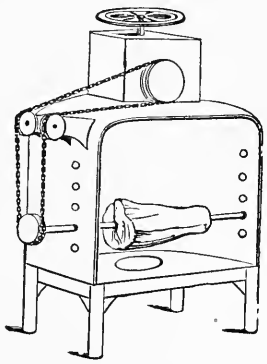


Bottle Jack.

an equal weight of the rump, round, or sirloin, and the neck or shoulder of mutton, or spare-rib of pork, than the leg.

Large kitchens are usually furnished with a smoke-jack, by means of which several spits can, if needful, be kept turning at the same time; but in small establishments a roaster which allows of more economy in point of fuel is commonly used. The "bottle-jack" shown in the cut is of very advantageous construction in this respect, as a joint may be cooked in it with a comparatively small fire, the heat being strongly reflected from the screen upon the meat; in consequence of this it should never be placed very close to the fire, as the surface of the meat would then become dry and hard.

A more convenient form of roaster is the "Imperial Spring Jack"; it is turned by means of a wheel and chain, of which the movement is regulated by a spring contained in a box at



Imperial Spring Jack.

the top. Some object to this apparatus as well as to the one figured above, that the meat cooked in either derives from the tin by which it is closely surrounded, the flavor of *baked* meat; but the bottle-jack, with a common roasting-screen containing shelves for warming plates and dishes, is not liable to the same objection.

ROBIN.—This bird, also called the *red-breasted thrush*, is generally found in large numbers in the Northern markets during the months of September and October when it is in season; and in the Southern markets during the winter months. A few also appear in the former in the spring months but no one should then purchase them, as it encourages the killing of them just at their pairing-time. Robins are among the best of the smaller game-birds. They are prepared, cooked, and served like WOODCOCK.

English Robins, known also as *cedar-birds*, *yellow-birds*, *chatterers*, etc., etc., are occasionally found in our markets in large numbers. They are but a morsel of delicate eating, and in season only in the fall months. Prepare, cook, and serve as directed for ORTOLAUS.

ROCHELLE SALTS.—This salt is technically known as tartrated soda; *i. e.*, cream of tartar neutralized by bicarbonate of soda. However known, the substance is a valuable remedial agent, too little used perhaps. It is most frequently administered effervescing as a seidlitz powder. Each of these powders contains two drachms of Rochelle salts with a sufficiency of bicarbonate of soda in the blue paper to cause effervescence when mixed in water with the contents of the white paper (tartaric acid). For most people such a quantity of the salt is quite sufficient to open the bowels easily and freely; others require more. This can easily be managed by telling the druggist to add more of the Rochelle salt to the blue paper of a seidlitz powder. The effervescing material requires no addition.

ROCK-BASS.—This fresh-water bass is a smaller fish than the black-bass, to which it is nearly allied, but is almost equal to the latter for table purposes. The color is of a very dark green above, sides of a golden-copper, with several rows of dark spots, and the fins of a bluish-green. The nose is also inclined to turn up. They are usually from half a pound to a pound in weight; and are in season from October to April, though seldom plentiful. Prepare, cook and serve as directed for BASS.

ROCK FISH.—*Rock*, *rock-fish* and *rock-bass* are the names given in the Southern markets to the fish known as *striped bass* or *streaked bass* in the Northern markets. It is in season very nearly throughout the year, and is one of the best of fishes either for boiling, broiling, or frying. (*See* BASS.)

ROCK-SALT. (*See* SALT.)

ROLLS.—Nice dinner or breakfast rolls may be made as follows:—Crumble down very small indeed an ounce of butter into two pounds of the best flour, and mix with them a large salt-spoonful of salt; put into a bowl a dessert-spoonful of strong brewers' yeast, and half a tea-spoonful of pounded sugar; mix these with half a pint of warm milk; hollow the centre of the flour, and pour in the milk and yeast gradually, stirring to it enough of the surrounding flour to make a thick batter; strew more flour on the top, cover the pan with a thick double cloth, and let it stand in a warm place to rise; in winter it should be placed within a few feet of the fire. In about an hour, should the leaven have broken through the flour on the top, and have risen considerably in height, mix one lightly-whisked egg, or the yolks of two with nearly half a pint more of quite warm milk, and wet up the mass into very smooth dough. Cover it over as before, and in from half to three-quarters of an hour, turn it on to a paste-board, and divide it into 24 portions of equal size; knead these up as lightly as possible into small round or olive-shaped rolls; make a slight incision round them, and cut them once or twice across the top, placing them as they are made in slightly floured baking-pans, an inch or two apart; let them stand fifteen or twenty minutes to *prove*, then wash the top with yolk of egg mixed with a little milk, and bake them in a rather quick oven from ten to fifteen minutes. An additional ounce of butter and another egg can be used for these rolls when richer bread is liked. A teacupful of good cream substituted for the butter will render the rolls exceedingly delicate both in appearance and flavor.

French Rolls.—*Take*:—Flour, 3 pints; milk 1 quart; yeast, 1 teacupful; egg, 1; melted butter, 2 tablespoonfuls; salt, 1 teaspoonful; soda, ½ a teaspoonful; sugar, 1 tablespoonful.

Make a light sponge of the flour, milk, and yeast; and then work the beaten egg, melted butter, salt, soda dissolved in hot water, sugar, and enough flour to make a soft dough; let this stand four or five hours; then roll out pieces of the dough very lightly into round cakes, and fold them not quite in the centre (or simply shape into balls); set these close together in the baking-pan, and let them rise one hour; just before putting them into the oven, cut deeply across each roll with a sharp knife. Bake half an hour.

Geneva Rolls.—*Take*:—Flour, 2 lbs; butter, 3 oz; brewers' yeast, 1 large tablespoonful; milk, 1 pint; eggs, 2; water 1 gill.

Break the butter down very small into the flour; add a little salt and make it into a sponge with the yeast, which should previously be mixed with some of the milk and water; let it rise in a warm place for an hour, then stir two well-beaten eggs to as much hot milk as will render them lukewarm, and work the sponge with them to a lithe light dough; let it stand from half to three-quarters of an hour longer, mould it into small rolls, place them in buttered pans, when light brush them with beaten yolk of egg, and bake them from twenty minutes to half an hour. To be eaten hot. If any are left, the prudent housewife will find them very nice for puddings or to grate for croquettes.

ROSE.—The rose is the loveliest of flowers, and whether indoors or in the garden every floriculturist should assign them a large space. The treatment of roses in indoor culture is the same as for other plants; the soil should be rich, the pots large enough to give room for growth, and plenty of sunlight should be secured. Their treatment in the garden is very simple. They need a deep, rich, well-manured soil, rather moist, but never wet. The best soil is fresh loam, enriched with well-rotted cow manure, with a little sand; if a top-dressing of this compost is given every spring before the buds start, the branches will make fine growth. The finest clusters of flowers are always produced on new wood, and close pruning will cause more new wood to grow; the knife, therefore, should be used freely. Cut all the old growth out, and prune in last year's branches somewhat; thus pruned, the roots will throw up new shoots from which will come the first roses of the garden. As soon as the plants are done flowering, thin out the weak shoots, and even some of the stronger ones, if they are too crowded; each shoot left should

be exposed on every side to air and sun. The summer-flowering kinds thus treated will continue their growth from the main stem, and bloom much finer another year; while the autumnal flowers push forth their buds the entire length of the stalk, and the second flowering is perfected. The flower-stalk should always be cut off; it exhausts the plant to form seeds, and consumes the strength that should go to forming new shoots. Cut them off as soon as the leaves fall; then remove the soil to the depth of three or four inches all around the bush, and spread over, almost next to the stem, a spadeful of rotted cow manure; throw back the soil that was removed, and, if the weather is hot and dry, water occasionally, and a vigorous growth and profuse flowering will be the result. When roses are planted in lawns they should have no sods near the roots, for the grass will absorb the moisture, and also prevent the air from reaching the soil. The best time to plant hardy roses is in October or November, according to the climate. The spring months are better for planting half-hardy and tender roses, as if parted in autumn their roots will not get started before the winter sets in. In the mild climate of the Southern States, however, they can be planted either in spring or autumn. When first set out they should be mulched with coarse manure, and watered occasionally, if the weather is warm and dry.

Roses are propagated chiefly by cutting, layers, and buds. *Cuttings* of the hardy roses will strike easily in July and August. Hybrid, Perpetual, Chinese, and Bourbon, with all the other kinds, will grow readily if the young shoot or cutting is cut off so close as to contain a piece of the old wood. Three, four, or even six eyes can be left above ground. Plant them in wet sand; a dozen cuttings may be set an inch apart close to the side of the pot, and the sand should not be allowed to dry at all. In two or three weeks they will commence to grow, and may then be transplanted. Roses grown as dwarfs or bushes are the best kind for *layering*. Loosen the soil around the plant, choose a good shoot, strip off a few leaves from six inches to two feet from the point of the shoot; insert a sharp knife just behind an eye on the upper side of the shoot, and pass it carefully upwards, cutting about half through the stem, and from an inch to two inches in length; open the soil, bend down the shoot, press it in, and peg it down with a hairpin or a bit of wood two or three inches below the surface, and cover it firmly. Each layer should be tied to a stake to prevent the wind from disturbing the roots. June, July, and August are the best months for layering. If the weather is dry and hot, water frequently; about October or November they will be advanced enough to take away. Cut them off within two inches of the root, and transplant them wherever they are desired; in the following spring, prune down the stem to three or four eyes, and they will bloom finely. *Budding* is a more difficult process than either of those above mentioned, and is less likely to be successful; we shall not, therefore, take space to describe it. (For general principles, *see* BUDDING.)

Slugs constitute the chief difficulty in the culture of roses. Before the buds are formed, minute white spots appear on the under surface of the leaves; these change rapidly into green worms which devour all the green part of the leaves and also the buds and flowers. If taken in season they may be destroyed. The "Grafton Mineral Fertilizer," scattered over the leaves before the dew is dried off, will drive them away; the first application should be made in May, a second early in June, and a third after the plant has finished blooming. Powdered lime, if scattered over the leaves while the dew is on, will also keep them off. White hellebore sprinkled on through a dredging-box, and flour of sulphur similarly applied, are also efficacious. There are two crops of slugs; the first comes in May, and when the worms are fully developed, they burrow in the ground, and lie in a chrysalis state until August, when they appear with wings, and lay a crop of eggs for the ensuing summer. If the first crop are not entirely destroyed, it is well to repeat the application in August, so as to diminish their numbers for the next season.

The varieties of the rose have increased with such rapidity of late years, that it would perhaps be literally impossible to enumerate them. From the thousands of varieties offered in the florists' catalogues, we can only select a few of the most desirable.

Bourbon Roses:—*Archduke Charles*, rosy crimson; *Bourbon Queen*, rich blush; *Blanche Lafitte*, pale flesh color, beautiful; *Duchesse Furringe*, white; *Empress Eugenie*, deep rose; *Jupiter*, dark purple; *Hermosa Pink*, a profuse bloomer, with lovely buds; *Malmaison*, blush, large and fine; *Omar Pasha*, deep carmine; *Paxton*, bright rose, crimson shaded; *Sombreuil*, white.

China Roses:—*Agrippina*, deep crimson; *Archduke Charles*, changeable; *Eugene Beauharnais*, rich crimson; *Indica Alba*, white daily; *Madam Peron*, fine rose; *Lucullus*, dark crimson; *Pink Daily*; *Louis Philippe*, crimson and rose; *Sanguinea*, blood-red.

Hybrid Perpetuals: — *Achille Gonaud*, bright carmine; *Alex. Bachmeteff*, deep brilliant rose, large and fine; *Baron Prevost*, rich rose color; *Cardinal Patrizzi*, dark, velvety crimson; *Comte Litta*, velvety purple; *Caroline de Sansal*, pale flesh color; *Eugene Appert*, scarlet crimson; *Gen. Jacqueminot*, brilliant red, very large; *John Hopper*, rosy-crimson, extra; *Jules Margottin*, carmine, shaded to purple; *La Reine*, clear rose, large cupped, superb; *Lady Emily Peel*, white, edged with rose; *Mad'lle Bonnaire*, pure white, tinged with rose at the centre; *Mad. Freeman*, white, with yellowish shade; *Pœonia*, deep brilliant crimson; *Reine des Violets*, reddish violet; *Victor Verdier*, large, full carmine, one of the best.

Moss Roses (Annual):—*English Moss*,

old variety, very mossy; *Adelaide*, crimson; *Glory of Mosses*, rose color, fine; *Alice Leroy*, pale lilac; *Luxembourg*, crimson; *Henry Martin*, brilliant carmine.

Moss Roses (Perpetual):—*Madame Edward Ory*, deep rose; *Maupertius*, dark velvety-red; *Perpetual White*, very fine; *Raphael*, blush, large clusters; *Salet*, bright rose; *Souvenir de Pierre Vibert*, dark red, shaded with violet.

Noisette Roses:—*Augusta*, pale yellow; *Annie Vibert*, pure white; *Beauty of Green Mount*, deep rose; *Gloire de Dijon*, bronze yellow, with orange centre; *Lamarque*, large, pure white, very fine; *La Pactole*, pale yellow; *Setina*, light pink; *Solfaterre*, yellowish white; *Souvenir de Anselm*, clear carmine, very fragrant; *Washington*, white.

Prairie Roses (Hardy Climbers):—*Baltimore Belle*, nearly white; *Gem of the Prairies*, rich rose-crimson, very fragrant; *Queen of the Prairie*, rosy red; *Seven Sisters*, crimson, shading to white.

Tea Roses:—*Alba Rosea*, white, with rose centre; *Amabilis*, rose color; *Belle Flamande*, blush; *Bon Silene*, purple, shaded to carmine; *Bougere*, salmon rose, bronzed; *Cornelia Cook*, canary yellow; *Devoniensis*, creamy white; *Leveson Gower*, rosy salmon; *Madame Falcot*, nankeen yellow; *Madame de Vatrey*, carmine rose; *Marechal Neil*, golden yellow, very fragrant; *Pauline Lebonté*, light blush; *Safrano*, bright buff; *Triomphe de Luxembourg*, rose color, *White Tea*, pure white, blooms freely.

ROSEMARY.—A pleasant aromatic plant which is a native of the south of Europe, and derives its name from its beautiful appearance when glittering with dew. Its leaves have a fine aromatic fragrance like camphor, of which, indeed, its oil contains one-fourth. The common, or green-leafed rosemary is sometimes put in soups and stews, and infusions of the leaves are put in some drinks; but its chief use is in the flowers giving their fragrance to Hungary water, and also sometimes to Eau de Cologne. Some varieties of the plant—as the *gold* and *silver-striped*—are quite ornamental.

ROSEOLA.—This disease, also called *rose rash* and *false measles*, resembles the eruption of measles in a good many respects, but is neither infectious nor contagious, and there is no watering at the eyes, and no cough. The skin is mottled of a rose-color, the patches being small and of irregular shape; sometimes the eruption appears as a cross of small, slightly raised, rose-colored spots. At first the eruption is bright red, but gradually it fades and disappears in from three to six days. The constitutional symptoms are slight; sometimes the throat is affected slightly as in scarlet fever, which has led some to believe that the disease is a mixture of scarlet fever and measles, but of that there is no proof whatever. Various maladies give rise to Roseola, the most important of these being syphilis. Syphilitic roseola ordinarily consists of a number of rose-colored spots completely isolated and even with the surface, but sometimes they are fused together so as to produce patches which are raised above the surface, and so merge imperceptibly into the eruption which commonly follows in secondary symptoms of syphilis; at the same time the fauces present a rim of redness corresponding to the external rash. Belladonna sometimes presents a roseolar-rash, but not often. In infancy, stomachic derangement or dentition often gives rise to such an eruption, and it occasionally precedes the eruption of small-pox.

Treatment.—Little in the way of treatment is necessary. The bowels had better be opened by a saline purgative (Rochelle or Epsom salts), and the diet restricted; after that a few doses of any alterative tonic will suffice to restore wonted health.

ROTTENSTONE.—This is an earth of an ash-brown color, found only in England. It is very light, moderately hard, dry, and useful as a polishing powder. It may be used either wet or dry.

ROUGE.—A well-known red paint for the face, so named from the French word for red. There are several kinds of rouge, but they are all composed of some vegetable color and talc or powdered French chalk. The most common kind is produced from the coloring matter of the safflower precipitated upon a layer of finely-powdered talc, and afterwards triturated with a few drops of olive-oil. The fineness of the talc and the proportions of the coloring matter occasion the difference in the price of the article. Another and better kind of rouge is made by reducing French chalk to a fine powder and mixing it in a mortar with carmine. As a great deal of the rouge sold is adulterated by adding vermilion to the carmine—a substance which is highly injurious to the skin, it is better when such paints are used at all to make them at home. We append accordingly the following receipts:—

1. Take one drachm of finely powdered carmine, and five drachms of powdered chalk. Mix and apply as usual.

2. Take one ounce of finely powdered French chalk, carmine fifteen grains, and half a drachm of oil of sweet almonds. Mix well.

3. *Liquid Rouge.*—Take of rouge, spirits of wine, white wine vinegar, and water, equal parts. Mix, and apply with a piece of fine linen rag.

4. *Spanish Rouge.*—Take a piece of linen rag, or, still better, some jeweller's cotton, wet it with tincture of cochineal until a good deep color is obtained, and let it dry. When required, moisten the wool, and rub the skin with it till the desired tint is obtained.

R. S. V. P.—Invitations to balls, parties, and, especially, dinners, sometimes have appended to them the letters R. S. V. P. (*repondez s'il vous plait*—"Answer if you please"). Such an invitation should be answered as soon as practicable, as the host probably wishes to gauge his preparations.

RUE.—This plant is now but seldom used

other than as a medicine, and is consequently not often found for sale. It has a strong, ungrateful odor, and a bitter, hot, and penetrating taste. In medicine, rue is chiefly employed in the form of oil, which is distilled from the leaves and unripe fruit. Rue, or its oil, is a powerful stimulant to the part to which it is applied, and hence it is sometimes given as a stimulant in flatulence. In hysterical affections, especially where the menstrual functions have been in abeyance, it is sometimes given with benefit. In these it may be employed as an enema. It has falsely obtained a reputation as an abortive. The dose of the oil when taken internally is from two to three drops.

RUM.—This is almost exclusively a West Indian product, and is made by distillation from fresh cane-juice and the scum which rises in the manufacture of sugar; and contains volatile and essential oils, which are produced both by the sugar-cane and the process of manufacture. It is also made from a mixture of the skimmings and the uncrystallizable residue of saccharine juice, or molasses, or even from molasses alone; the two latter, however, are by no means equal to the first in volatile oils and ethers, and therefore in the flavor of the rum. By the addition of pine-apple in the process of fermentation a new flavor is obtained, and the product is sold as *pine-apple rum.* Rum improves by age as much or more than any other spiritous liquor, both in what it loses and in what it gains. New rum is generally strong, and readily produces intoxication, and is said to be injurious to health by inducing a tendency to fever in hot and to disease of the liver in cold climates; whilst old rum has lost spirit and gained œnanthic ether, and has been greatly improved in softness and flavor. "Rum of moderate age," says Dr. Edward Smith, "may properly be esteemed the purest and most healthful member of the class of alcohols, and is, I believe, the most perfect cordial with which we are acquainted."

The best rum is of a brown transparent color, a smooth mellowed, oily taste, and of strong body and consistence; that of a clean limpid color, and hot, pungent taste, is either too new or has been mixed with other spirits. *Jamaica rum* is the first in point of quality, the *Leeward Island rum* being always inferior to it in point of flavor, strength, and value. The price of the latter is usually twenty per cent. below that of the former, which occasions the Jamaica rum to be sometimes adulterated with the latter. (*See* PUNCH).

RUPTURE. (*See* HERNIA.)

RUSK.—*Take:*-Flour, 2 lbs; butter, 6 oz; brewer's yeast, 2 tablespoonfuls; eggs, 3; milk, nearly ½ pint.

Break the butter into flour, and mix them into a lithe paste with the yeast, eggs, and warm milk; set it to rise, and when it has risen to its full height, knead it smooth and make it into small loaves or thick cakes cut with a round cake-cutter; place them on a floured tin, and let them stand in a warm place from ten to twenty minutes before they are set into the oven. Bake them about a quarter of an hour; divide them while they are still warm, and put them into a very slow oven to dry. When they are crisp quite through they are done.

Or, mix well together half a pint of new milk, the beaten yolks of three eggs, one gill of home-made yeast, and a pound and a half of flour; leave it in a warm place to rise over night. In the morning cream seven ounces of butter, and beat it until light with three-quarters of a pound of powdered sugar; add the whites of the eggs whisked to a stiff froth and half a teaspoonful of soda dissolved in a tablespoonful of hot water; work all thoroughly together with the hand and knead in three-quarters of a pound of flour: leave it to rise again, then roll it out half an inch thick, using as little flour as possible, cut it with a ring not more than two and a half inches across, place in buttered pans and when risen again (the third time) prick and bake in a quick oven. Rusks are never to be eaten hot; cool them.

Sweet Rusk.—The first recipe may be converted into *sweet rusks* by adding four teaspoonfuls of sifted sugar.

RUSSIAN BATH.—The Russian bath differs from the Turkish bath, which it resembles in other respects, in the fact that steam is used instead of dry hot air for inducing the perspiration and general activity of the skin, which is the object aimed at in all vapor baths. The bather, in taking the Russian bath, as it is administered in this country, enters first a room filled with steam, and is laid on a shelf in such a position that the steam reaches every part of his body; after remaining there until he is in a profuse perspiration, he is rubbed and manipulated by an attendant, and then led out to a pool of comparatively cold water into which he plunges; from this he goes again into a steaming room, or plunges alternately into hot water and cool. The process ends by a gradual cooling off in a room of moderate temperature. The same effects and the same advantages are claimed for the Russian bath as for the Turkish (SEE TURKISH BATH). It is to be observed, however, that owing to the free evaporation from the surface, the hot-air, or Turkish bath can be borne of a much higher temperature than the vapor or Russian bath, and consequently the effects are more decided and the re-action more vigorous. The former should never be taken at a temperature higher than 140° F.

RUST (To prevent).—Iron or steel immersed for a few minutes in a solution of carbonate of potash or soda will not rust for years, even when exposed to a damp atmosphere. To preserve polished iron-work from rust, mix some copal varnish with as much olive-oil as will make it greasy, to which add nearly as much spirits of turpentine, and apply.

To clean rust off iron or brass (when the latter is not gilt or lacquered), mix tripoli with half its quantity of sulphur, and lay it on with a piece of leather; or emery and oil will answer

the same purpose. If steel be rusty, oil it, and let it remain two or three days; then wipe it dry with clean rags, and polish with flour-emery, pumice-stone powdered, or unslacked lime.

RYE.—Rye is a product of little importance from the household point of view, since it is rarely used in cookery, and then is always mixed with wheat-flour or Indian-meal. It is inferior to wheat in nutritive properties, and also in flavor and digestibility. Rye-flour should be bought in small quantities at a time, and kept in a keg or half-barrel with a cover. (*See* BREAD.)

Drop-cakes (Rye).—*Take:*—Milk, 1 pint; eggs, 3; sugar, 1 tablespoonful; salt, 1 salt-spoonful; rye-flour.

Mix the other ingredients well together, and stir in rye-flour till the paste is of about the consistency of pan-cakes; put into buttered cups or saucers, and bake half an hour.

Griddle-cakes (Rye).—*Take:*—Milk, 1 quart; eggs, 3; salt, ½ teaspoonful; rye-flour.

Mix the milk, salt, and the yolks of the eggs; stir in enough rye-flour to make a rather thick batter; at the last moment stir in the whites of the eggs, beaten to a stiff froth, and bake on the griddle in the usual way.

S

SABLE.—The skin of the sable. The Russian sable is the most costly of all furs, and may be distinguished from all others by the hairs turning and lying equally well in all directions. The fur of the animal from which it is taken is brown in summer, with some grey spots about the head; in winter, when the animal is usually taken, the fur is beautifully glossy and black. The darkest skins are the most valuable. In its natural state the fur has a bloomy appearance; but dyed sables generally lose their gloss and the hairs become twisted or crisped. Sometimes the skins are blackened by being smoked, but the deception may be detected from the smell and the crisped hairs; a dyed or smoked fur may also be detected by rubbing it with a moist linen cloth, which will then become blackened. But few Russian sables reach the American market, and these are made into ladies' muffs and boas. The price of the choicest sets, consisting of these two articles, is from $1000 to $1600, though sets of lighter shade and inferior quality may be bought for from $250 to $400. The Hudson Bay sable is the leading fur in England, France, and Germany; and is much used in the United States for muffs and boas. A set of this costs from $100 to $300.

SACHETS OR SCENT-BAGS.—These are very pleasant to put in drawers or trunks where clothes, etc., are kept, as they completely disguise the stale or musty smell which such receptacles are likely to acquire otherwise. Take lavender-flowers, half a pound; gum benzoin, powdered, one ounce; oil of lavender, two drachms. Mix, and put into small silk bags or ornamental envelopes.

Heliotrope Sachet. — *Take:*—Powdered orris-root, half a pound; rose-leaves, quarter of a pound; tonquin-beans, two ounces; vanilla-beans, ground, one ounce; grain musk, one drachm; otto of almonds, two drops. Mix well in a coarse sieve. This is one of the best sachets made, and is very similar in its odor to the flower from which it derives its name.

Rose-Sachet.—Rose-leaves, a quarter of a pound; santal-wood, ground, two ounces; otto of roses, half a drachm. Mix.

Santal-wood Sachet.—Ground santal-wood, which can usually be purchased at the drug-stores, makes good and economical sachets.

SACKING.—A very coarse and strong canvas cloth used in making sacks or bags in which heavy and bulky substances are to be kept. It comes a yard and two yards wide.

SACQUE OR JACKET.—We draw for a

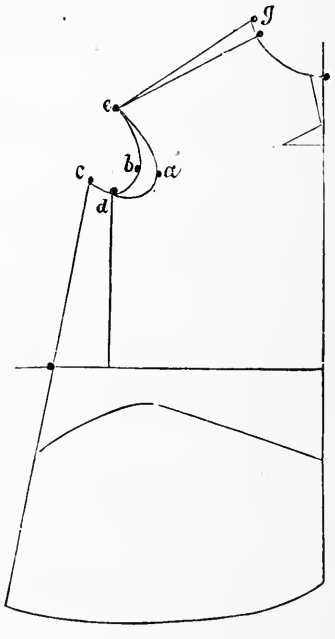


Fig. 1.

sacque the pattern of a plain waist (*see* WAIST), allowing the paper to come below the waist line as far as desired for the length of the garment. This pattern now requires three modi-

fications: 1. We enlarge the breadth of the chest (IV)* by about an inch, according to the desired looseness of the sacque, and mark the breadth *b*. 2. We remove the side line correspondingly to the left, and design the arm-size accordingly. 3. We prolong the side line, making the garment an inch wider to every four inches additional length. Sometimes also the neck requires to be enlarged as shown at *g*.

The length needful for the back is about two inches more than that of the front. The back (Fig. 2) is designed as for a plain waist, without

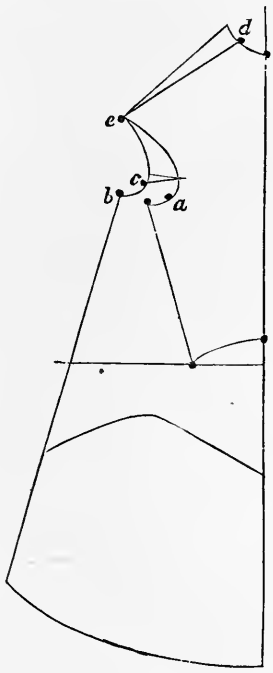


Fig. 2.

forms. The width of the back is then increased by about 1½ inches. As in the front, the arm-size is then enlarged, and the side line is carried down obliquely, the garment widening in the back a scant inch to every two inches of length.

The garment is cut whole in the back, the pattern being laid upon the straight way fold of the cloth. After being put together, it will be finished at the edges by a facing; and frequently cuffs and a collar. By observing the rules for a plain waist with *revers* (*See* WAIST), a double-breasted sacque may readily be made.

Every variety of modification of the lower edge may be made in cutting this garment. Also the sleeves may be loose or tight as desired. A plain coat-sleeve (*See* WAIST) is undoubtedly the most suitable.

In the fit of the sacque, the part near the sleeves is most essential. Care must be taken that the garment is broad enough across the chest, and that the shoulder lengths are not too long.

A variety of the sacque, designated as the half-fitting casaque or paletot, is made after the pattern of the straight sacque, with these modifications: The side lines of back and front, from *c* and *b* down to the waist, are made curving, so as to diminish the breadth of the garment, which spreads out again below the waist with the same proportions indicated above. Also the back is cut in two pieces, that is to say, it has a seam in the middle, taken up more towards the waist.

By this pattern also are made the sacques or paletots worn by little boys. If it be not desired to leave the garment open all the way down in front, the front, like the back, may be cut in one piece; then, when the two parts are put together under the arms and on the shoulders, a slit is cut in the front, either straight in the middle, at one side, or crossing the chest obliquely. This slit is faced on each edge, and buttonholes are made on the left, and buttons sewed on on the right. The garment also may be made to open upon one shoulder. We then sew the buttons on the back and make the buttonholes in the front, and it is usual for symmetry, to put a corresponding row of buttons upon the other shoulder. These sacques require a belt, and may receive trimmings of all varieties suited to the material of which they are made.

Of the same general description are the vests and sleeveless jackets, and sacques for house wear, which are so generally popular.

The figures 3, 4, represent a sleeveless jacket, made as follows:

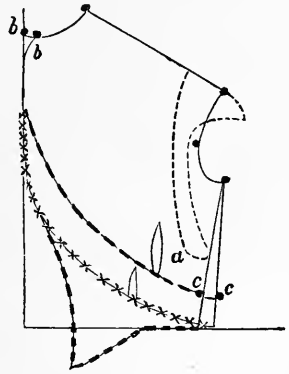


Fig. 3.

We design a pattern of a plain waist, and make in front only one part of the shape indicated at *a*. It is very short, large in the middle, and vanishing at both extremities. This represents the second part of the plain waist. The first is dispensed with by cutting the front line away in a curve to meet the side *c*. The back is made with or without forms as preferred.

* See CUTTING and FITTING.

The dotted lines about the arm-size indicate a tasteful manner of cutting out these openings, which, as no sleeves are required, may vary their shape in many ways.

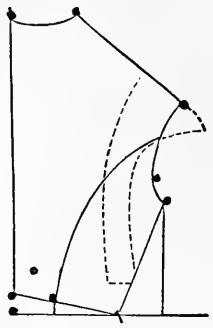


Fig. 4.

In cutting jackets without darts at all, if it be desired to lengthen the garment in front, like the old-fashioned waist-coat (represented by the interrupted line, going below the waist, in Fig. 3), the following method may be adopted: In preparing the lining, or the paper pattern, if the garment is to have no lining, a very short dart should be taken up and sewed, or pasted, if on paper, firmly. Then the material, cut after this lining or paper pattern, will adapt itself very gracefully to the figure without any visible darts.

Vests are often made to be worn with garments open in front, composed of fronts made of the desired material, and the back of lining merely. These fronts may be cut either as just explained, without darts, or by the plain waist pattern, or by the pattern of the waist of the princesse dress. If desired to make a very loose garment, the back of this vest may be cut from the blouse pattern, and held by a drawing string. Invalids who cannot wear a tight waist will find many advantages in combinations like these.

SAFFRON.—The dried stigmata of a species of crocus. It was formerly used in England as a seasoning for certain dishes; but is now employed chiefly as a coloring matter for cheese and butter. It is not often procurable in this country, that sold as such being generally the product of the safflower. Pure saffron has a beautiful yellow color and an agreeable odor; it yields its active principle, an essential oil, to water and spirit. The adulteration with safflower and marigold is easily detected, for the petals of these flowers will appear distinct from the stigmata of the crocus. The English saffron is the best.

In medicine the only preparation of saffron is a tincture, which is little used save for its coloring properties. Saffron is contained, however, in decoction of aloes, aloes and myrrh pills, compound tincture of cinchona, ammoniated tincture of opium, and tincture of rhubarb.

SAGE.—There are several varieties of this well-known herb, of which the *common green* is the best. It has a strong fragrant smell, and a bitter, warm taste. Its leaves are much used in sauces, stuffing, and other preparations in cookery. It is also a favorite domestic remedy, being used as a gargle for sore throat, mixed with honey and alum or some other astringent. As a wash for ulcers about the mouth or lips, it is very pleasant and sometimes efficacious. It is usually found in the markets, tied up in small bunches, both green and dried.

SAGO.—The produce of the sago palm, and several other palms, which grow spontaneously in the East Indies and the islands of the Indian Ocean. The part which affords the sago is the pith, and to procure this the body of the tree is cut down when it is full grown, sawed in pieces, and the raw sago cut out and put into a trough with water, in which it is well stirred to separate the flour from the filaments. This is now suffered to rest, and the flour subsides to the bottom; the water is then poured off, and the wet flour laid upon wicker frames to dry. To form it into the round grains in which we have it, the sago, when moist, is passed through a colander, rubbed into little balls, and thoroughly dried. The nutritive value of sago is not very high, since it consists almost exclusively of starch, and is therefore inferior to rice, and much inferior to the farinaceous foods grown in our own climate. It is delicate in flavor, however, and very digestible; and for these reasons is especially useful in the sick-room. The best sago is of a slightly reddish hue, and readily dissolves in hot water to a jelly, but differs from wheat-starch in being likewise soluble in cold water. A superior sort is imported from China which has a pearly lustre. Sago should be purchased in small quantities at a time, and kept in covered jars, or covered wooden boxes. (*See* PUDDINGS, AND SOUPS.

Jelly (Sago).—Soak a teacupful of sago in cold water half an hour, then pour off the water, add fresh, and soak it another half hour; then boil it slowly, adding a pinch of salt, a stick of cinnamon, or a bit of orange or lemon peel, and stirring constantly; when the jelly thickens, add wine and white sugar to taste, let it boil a minute, and then turn it into cups.

Milk (Sago).—Soak three tablespoonfuls of sago for an hour in a teacupful of cold water; pour it into three teacupfuls of boiling milk; sweeten and flavor to taste; simmer slowly half an hour.

SALAD.—We shall here treat only of dressings and some vegetable salads; recipes for other salads are given in the articles on the various substances from which they are made. (*See* CHICKEN, LOBSTER, etc.) Meat used for salad, whether of fish, flesh or fowl, should not be *minced*, but picked or cut, not very fine. Vegetables good for salad are: boiled asparagus, cabbage (red and white), every species of let-

tuce; chicory, boiled cauliflower, celery, dandelion, purslane, water-cress, etc. All these are prepared substantially in the same way; that is, they are taken when quite fresh and crisp, cut or broken into shreds (lettuce is frequently served with the leaves entire), and covered with a seasoning or *dressing*. This dressing consists chiefly of oil, vinegar, salt, pepper, and mustard, mixed in various proportions. All the ingredients of salad-dressing should be of the best. The olive oil should be pure; the vinegar, either wine with tarragon in it, or the best cider-vinegar; and English mustard. The sooner salad is eaten after it is dressed, the better.

Salad-dressing.—I. Take the yolks of two hard-boiled eggs and two raw eggs, put them into a flat dish with a large spoonful of fresh mixed mustard, a little salt and Cayenne pepper; stir these well together with a large wooden spoon or egg beater; turn in by degrees half a bottle of olive oil, half a teacupful of vinegar, and the juice of a lemon, stirring all the time. Cream may be substituted for the oil.

II. Rub the yolks of two hard boiled eggs to a powder; add a teaspoonful of white sugar, one of pepper, half a teaspoonful of salt, half a teaspoonful of mixed mustard, and two teaspoonfuls of olive-oil; mix well together, and set aside for five minutes; then beat in four tablespoonfuls of vinegar. This will serve for lettuce or cabbage.

III. Take the yolks of two hard-boiled eggs, mash them to a paste, and add half a teaspoonful of mixed mustard, a little black pepper, a little salt, three tablespoonfuls of olive oil, and three of vinegar; mix together thoroughly. A tablespoonful of catsup may be added if liked.

IV. **English Salad Dressing.**—To the yolks of two hard-boiled eggs mashed to a paste with the back of a wooden spoon, add a small saltspoonful of salt, a small teaspoonful of powdered sugar, a few grains of fine Cayenne, and a teaspoonful of cold water; mix these well, and stir to them by degrees a quarter of a pint of cream; throw in next, stirring the sauce briskly, a tablespoonful of strong Chili vinegar, and add as much common vinegar as will acidulate the mixture agreeably. A tablespoonful of either will be sufficient for most tastes, but it is easy to increase the proportion when more is liked. Six tablespoonfuls of olive oil may be substituted for the cream; it should be added very gradually to the other ingredients, and stirred briskly until the sauce resembles custard. When this is used, the water should be omitted. This is a very delicate and savory dressing, either for ordinary salad or for cold fish.

V. Beat a raw egg with a saltspoonful of salt until it is thoroughly smooth then add a teaspoonful of mixed mustard made rather thicker than usual; when these are quite smooth, add by degrees half a pint of olive-oil, taking care to blend each portion of it with the egg before adding more. This ought to make a tenacious mass, so thick that a teaspoon will stand up in it, and as smooth as honey. Dilute it with vinegar, till it assumes the consistence of thick cream. No salad-dressing is so smooth and rich as this, and the usual oily flavor is lost from the *raw egg* converting the oil into an emulsion. A little anchovy may be added if desired and the juice of a fresh lemon may take the place of the vinegar.

VI. **French Salad-Dressing.**—Stir a saltspoonful of salt and half as much pepper into a tablespoonful of oil, and when the salt is dissolved, mix with them four additional tablespoonfuls of oil, and pour the whole over the salad; let it be *well* turned, and then add two tablespoonfuls of tarragon vinegar; mix the whole thoroughly, and serve without delay. The salad should not be dressed in this way until the instant before it is wanted for table; the proportions of salt and pepper can be increased at pleasure.

Mayonnaise Dressing.—See recipes, Nos. I. and V. in the preceding column, and also under SAUCES.

Potato Salad.—This is prepared rather differently from the regular salad vegetables. A potato-salad is the one that requires most seasonings, especially oil and vinegar; it is better served warm than cold, though many prefer it in the latter state. Boil the potatoes, peel and slice them, and put them into a salad dish with salt, pepper, vinegar, oil, and parsley to taste; mix the whole gently but thoroughly, and serve. If served very warm, butter may be used instead of oil. Cold potato-salad is improved by using a larger proportion of vinegar, and adding a few shreds of onion—one onion to half a dozen potatoes.

Walnut Salad.—This is a common summer salad in France, where the growth of walnuts is generally abundant, but it is not often served in this country; though the sweet flavor of the just-formed nut is very agreeable. Take the young walnuts when a pin will pierce them *easily*, pare them down to the kernels, and toss them gently, just before they are served, in the French or English (No. 1) salad-dressing (the former would generally be preferred), and turn them into the salad bowl for table.

Water-Cress.—Wash and pick over the cresses carefully, pluck the tender shoots from the stems, and pile in the salad-bowl with a dressing of vinegar, salt, pepper, and sugar, well stirred in. It is best not to dress until just before serving.

SALERATUS.—A salt formerly prepared from pearlash by exposing it to carbonic acid gas That now generally sold is bicarbonate of soda. It is much used in making bread, etc., to neutralize acids and thus render the bread light by the escape of the carbonic acid gas. Saleratus should be bought in small quantities, then powdered, sifted, and kept in a wide-mouthed bottle tightly corked. It grows damp if exposed to air. In that case add just as much water as will dissolve it; a tablespoonful of this equals a

teaspoonful of the solid. Keep it tightly corked in a bottle.

SALIVATION.— A term applied to a condition in which there is increased flow of saliva with swelling of the mucous membrane of the mouth. In most cases it is caused by the action of mercury, but it has been found that many other agents may have the same effect. Iodide of potassium, antimony, croton oil, castor oil, opium, and foxglove have been known to produce the milder symptoms of salivation. An increased flow of saliva without swelling or ulceration of the gums and cheeks may be produced by irritation of the mucous membrane of the mouth and alimentary canal, and by mental influences.

The mercurial salivation commences with tenderness of the gums and inner surfaces of the cheeks, and pain when the teeth are brought sharply together. The patient experiences a metallic taste. The secretion of saliva is so much increased that it accumulates in the mouth, and necessitates frequent spitting, and during the night flows from the mouth and saturates the pillow. The daily amount of saliva, which in health is about ten ounces, increases to four or six pints. The tongue then swells, and the mucous membrane of the gums and cheeks becomes inflamed, and finally ulcerates. The breath has a very offensive and peculiar odor. In bad cases the ulceration extends, and by destroying the tissue of the gums exposes the bone of the upper and lower jaws. These symptoms are usually associated with those of gastric and intestinal irritation, and of nervous debility, and excitement; with the exception of the metallic taste in the mouth none of the above symptoms are peculiar to mercural salivation, and a similar condition may be presented in cases of salivation due to constitutional causes. Cancrum oris, a gangrenous affection of the mouth which is occasionally met with in children suffering from measles, is often attributed by the parents to the effects of mercury, supposed to have been administered for the treatment of the febrile disorder. Cases of severe salivation produced by the medicinal use of mercury, are at present extremely rare, as the effects of mercury are seldom allowed to proceed beyond slight redness and tenderness of the gums. In cases where intense salivation has been produced by the administration of large quantities of mercury, other symptoms of mercurial poisoning are generally present; of these the most prominent are pallor, trembling, an eczematous eruption over the surface of the body, and general debility. In some peculiarly constituted patients mercury may produce all the latter symptoms, and not give rise to salivation or any affection of the mouth. The property of producing salivation is common to all the preparations of mercury used in medicine, the most active being calomel and blue pill. Mercury when introduced into the system in other ways than through the mouth and stomach, as by inunction, fumigation and hypodermic injection, does not fail after a certain time to produce similar symptoms of salivation. In the treatment of local affections, especially venereal sores and cutaneous eruptions, the first appearance of the symptoms of mercurial salivation is generally presented by a decided improvement in these affections, the indurated bases of the sores have commenced to soften, and the rash on the skin is less distinct. Salivation may be produced either by a very large and poisonous dose of mercury, or by frequently repeated small doses. In some cases there is a long interval between the end of the course of mercury and the first appearance of symptoms of salivation, mercury being a cumulative poison which may be stored up in the body slowly and gradually until it is in sufficient force to give rise to salivation and other affections. Some individuals are extremely sensitive to the action of mercury, and become salivated after very small doses of calomel or blue pill. Other individuals, on the contrary, are so constituted that they can resist for a long time the action of large and frequently repeated doses of mercury, or even remain quite invulnerable. A patient who has been subjected to two or more courses of mercurial treatment becomes much less susceptible on each occasion to the action of the medicinal agent, and is less liable to be salivated by the last than by any previous course. The early occurrence of salivation during a mercurial course is much favored by a want of attention to the cleanliness of the mouth, and by bad teeth and soreness of the gums. Catching cold and even a slight exposure to cold and wet will often cause early salivation.

During a course of mercury great attention should be paid to the state of the mouth. The teeth should be frequently brushed, and the patient, in order to harden the mucous membrane of the gums and cheeks, should wash out the mouth occasionally with some astringent gargle and suck small pieces of alum. In cases of mercurial salivation the cause should at once be removed. The swollen and ulcerated mucous membrane of the mouth should then be washed with a solution of chloride of lime, or of alum, or of brandy-and-water. Chlorate of potash should be used as a gargle, and taken internally in 20 grain doses every three or four hours.

SALLY LUNN.—I. *Take:*—Butter, 4 level tablespoonfuls; brown sugar, 1 tablespoonful; milk, 1 pint; egg, 1; home-made yeast, 1 gill; flour, to make a stiff batter.

Put the butter and sugar into the milk, and set over the fire till melted, add the egg well beaten; yeast and flour to make a stiff batter. Grease the baking-pan well, pour the sponge in, and set to rise in a warm place; when fully risen, bake brown in a moderate oven.

II. *Take:*—Flour, 3 pts; eggs, 2; melted butter, ½ teacupful; warm milk, warm water, ½ pt each; home-made yeast, 4 tablespoonfuls; salt, 1 teaspoonful; soda, ½ teaspoonful.

Beat the eggs to a stiff froth, and add the

milk, water, butter, salt, and soda (the latter dissolved in hot water); stir in the flour till a smooth batter is formed, and then beat the yeast in well. Put it in a buttered pudding-dish (in which it should be sent to table), or a *well*-buttered mould, if you wish to turn it out after baking; and set it to rise about six hours. Bake in a moderate oven three-quarters of an hour, or until a straw thrust into it comes out clean. Eat while hot.

SALMAGUNDY. (*See* ENTREES.)

SALMON.—The best salmon have small heads and are quite thick through the shoulders; their usual weight is from six to twelve pounds each, though occasionally they are much larger. They are usually cut to suit purchasers. The middle cut is the choicest, though some prefer the head and shoulders, and others again the tail piece. When cut, the flesh should look quite red, solid, and flaky. Of the different kinds of salmon found in our markets, the Eastern salmon, from the Kennebec River, are considered best, those from the Penobscot and St. John's rivers are next. They begin to appear about the 1st of March, and are in season till the 1st of September. *Scotch salmon*, brought from Scotland in the steamers, are found in small quantities in the market throughout the year; but are seldom in good condition; they do not rank with Eastern salmon when in season.

Large quantities of salmon are sold in the cured state—pickled, salted, smoked, etc. These are sold singly or in packages at much lower prices than are asked for the fresh fish. Raw smoked salmon, cut into smooth strips three or four inches long, makes an excellent supper-dish; it should be eaten with pepper-sauce or some other pungent condiment.

Baked Salmon.—Wash and wipe dry, and rub with pepper and salt; lay the fish upon a grating set over the baking-pan, and bake (or roast), basting freely with butter, and, toward the last, with its own drippings only. If it browns too fast, cover the top with a sheet of white letter-paper until the whole is cooked. When it is done, put it into a hot dish and cover closely; add to the gravy a little hot water thickened with arrowroot, rice-flour, or wheat-flour—wet the flour first with cold water,—a tablespoonful of tomato sauce, and the juice of a lemon; boil up and serve in a sauce-boat.

An excellent sauce for salmon is made as follows:—Take a pint of cream or half milk and half cream, and heat it in a vessel set in boiling water: stir into this four ounces of butter rubbed with four even tablespoonfuls of flour, and a little salt and chopped parsley; stir until thickened. For boiled salmon this sauce is improved by adding two tablespoonfuls of the water in which the fish was boiled.

Boiled Salmon.—To preserve the fine color of the fish, and to *set the curd*, put into boiling instead of into cold water. Scale, empty, and wash carefully, being especially careful to cleanse all the blood from the inside. Stir into the fish-kettle eight ounces of salt to a gallon of water, let it boil quickly for a minute or two, take off all the scum, put in the salmon, and boil it moderately fast, should it be small, but more gently should it be very thick. From two to three pounds of the thick part of a salmon will require half an hour to boil it properly; but eight or ten pounds will be done enough in little more than double that time; less time in proportion to its weight should be allowed for a small fish or for the thin end of a large one. Do not allow the salmon to remain in the water after it is ready to serve, or both its flavor and appearance will be injured. Dish on a hot napkin, and send anchovy, shrimp, or lobster sauce, and a tureen of plain melted butter to table with it. The cream sauce given under *baked* salmon is unsurpassed.

Crimped Salmon.—Cut into slices an inch and a half or two inches thick the body of a *quite fresh* salmon; lay them in strong salt and water, but do not let them soak in it; wash them well in clear water, lay them on a fish-plate, and put them into fast boiling water, salted and well skimmed. In from ten to fifteen minutes they will be done. Dish them on a napkin and send them very hot to table with lobster sauce and plain melted butter; or with caper-sauce.

Fried in Oil.—Turn into a small deep frying pan, a small bottle of good olive-oil, place it on a clear fire, and as soon as it ceases to bubble lay in a pound and a half of salmon properly cleansed and dried in a cloth, and fry it gently until it is cooked quite through. The surface should be only lightly browned. Drain the fish well when it is done, and when it is perfectly cold, dish, and garnish with parsley or any green foliage.

Pickled (Fresh) Salmon.—Take a salmon, wipe it on the scaly side, remove the gills, and cut off a piece of the tail: split it from the head, at the back, and through the belly; put aside the liver, and clean the inside with a cloth; strew salt over the fish, and let it lie three hours and the tail two hours longer in salt. Cleanse it in fresh water; then dry it, cut into pieces, leaving a handsome head, or jowl, and place them in a fish-kettle, and just cover the fish with water and set on the fire. Mix half a pint of vinegar with the water, boil slowly for ten minutes, and then only simmer till the fish will easily leave the bone; take it out when nearly cold, and lay it in a deep dish. Skim off the top as much liquor as will cover the salmon, and tying up the liver in a piece of linen rag, add some whole black pepper, simmer half an hour, take it off, and when lukewarm, pour it over the fish. In using it, always keep the salmon covered with liquor.

A ready way to pickle salmon already boiled is to add a fourth part of vinegar to some of the liquor in which it was dressed, with some whole black pepper and salt; boil this liquor half an hour, then pour it hot over the fish and cover.

Pickled (Salt) Salmon.—Wash the salmon through two or three waters, rubbing it lightly with a cloth; then place it in lukewarm water and let it soak over night; next morning transfer it to very cold water and let it remain several hours then take it out, wipe dry with a cloth, and cut into small pieces convenient for serving; drop these when all are ready, into a saucepan of boiling water. Meanwhile prepare a pickle of two quarts of vinegar, a dozen white pepper corns, a dozen blades of mace, a dozen cloves, three tablespoonfuls white sugar, two tablespoonfuls mixed mustard, and a pint of the water in which the fish was boiled; boil up hard, and skim. When the salmon has boiled hard five minutes, fish out the pieces with a wire spoon, and pack them in air-tight glass jars or fruit cans; fill up the jars with the boiling pickle and seal immediately. This will be ready for use in a day or two, will keep a long time, and is scarcely inferior to the fresh pickled salmon. Of course it is much cheaper.

Potted Salmon.—Split a salmon at the back and through the belly; scale it clean, and wipe it dry. Lay fine salt upon it, and let it lie until the salt is dissolved; then mix black pepper, mace, cloves, in powder, and a little brown sugar, which rub all over the red side of the salmon; then put it into a pan, with a few bay leaves, cut in pieces, and plenty of butter (with the salt washed out), and bake in a slack oven. When done, pour off the gravy, take out the fish, which lay to drain on a cloth; then put it into pots, press down closely, and pour over it melted butter and tie over. This, if made properly, will be quite equal to the potted salmon sold in the shop.

Pudding (Salmon).—Pound, or chop small, or rub through a sieve one pound of cold boiled salmon freed entirely from bone and skin; mix it lightly but thoroughly with half a pound of fine bread crumbs, a teaspoonful of essence of anchovy, a quarter of a pint of cream, a seasoning of fine salt and cayenne, and four well beaten eggs. Press the mixture closely and evenly into a deep dish or mould, buttered in every part, and bake it for an hour in a moderate oven. This is a popular Scotch dish.

Salad (Salmon).—Boil some thin slices of salmon in salted water as directed for "boiled salmon," drain, and serve cold on a napkin. Serve with it, in a sauce-boat, the following dressing: Half a teaspoonful of salt, a pinch of pepper, two tablespoonfuls of vinegar, four of olive oil, a pickled cucumber chopped fine, two or three anchovies chopped fine or pounded, and a tablespoonful of capers; beat together thoroughly.

Salt Salmon.—Salt salmon, and in fact any other salt fish, may be cooked and served as directed for salt cod. (*See* COD.)

Smoked Salmon.—As already mentioned, smoked salmon is usually eaten raw, as a supper dish. It is also excellent broiled. For broiling, wash it in two waters, boil it gently for fifteen minutes, wipe dry and broil on a hot fire till neatly browned on both sides; then spread liberally with butter, and sprinkle pepper on it.

Steaks (Salmon).—Cut the fish completely across in slices about an inch thick; dry them well between the folds of a napkin. If for frying they may be dusted with flour, which should be spread evenly over their surface with a feather; if for broiling, season with the slightest sprinkling of pepper and salt, and put on the gridiron over hot coals; when brown on both sides, butter each slice and serve hot. The turning must be done very carefully or the slices will break. Either anchovy or caper-sauce goes well with salmon steaks, which, however, may be eaten plain.

SALMON TROUT.—This delicious fish, also called the *sea-trout*, is very similar to the common salmon, both in appearance and in taste; but it is inferior in size, the head and mouth are smaller, and its back is of a darker green while its sides are silvery. The salmon trout is never black inside the mouth like the common brook-trout. It is even scarcer than the salmon and commands an equally high price; it is in season about the same time. The female is considered best for the table, and may be distinguished by a small head and very deep body. Their usual weight is from three to ten pounds, though occasionally they are found larger. Prepare, cook, and serve as directed for SALMON.

SALSIFY. (*See* OYSTER-PLANT.)

SALT.—Common salt, or chloride of sodium, is found in great abundance in the waters of the ocean, sea-water containing about three per cent. on an average. It is also found in the solid form, composing rocks in various parts of the world; this is called *rock-salt*. There are likewise many springs of water issuing from the earth so highly impregnated with salt that they are called *salt-springs;* these are supposed to owe their origin to water passing through rock-salt under ground, in consequence of which it dissolves a portion; on evaporating the water of these springs, or sea-water, by boiling, salt is procured. From whichever of these sources salt is obtained, it is never quite pure, being at first contaminated with earthy substances or with other salts, as Epsom salt (sulphate of magnesia) and Glauber's salt (sulphate of soda); and it has to be purified or refined before it is fit for domestic use. The salt produced by salt-springs is generally purest and best, and it is from this source that most of the salt used for culinary or table purposes in this country is derived. Common salt will generally attract water and thus become damp; it should therefore be kept in a box with a tightly fitting cover, and kept in a warm dry place.

SALVES. (*See* DRUGS, GLYCERINE, and under the special cases to be treated.)

SALVIA.—This is the most gorgeous of

all the fall-flowering plants. It grows from four to five feet high, making a handsome symmetrical bush, and during September and October is covered with tassels of the brightest scarlet or blue flowers. It is unequalled for planting in masses, but is extremely tender, the first frost rendering it a blackened mass. Salvias may be raised from the seed, but it is best if possible to procure the small plants from the florist in the spring, and plant them in good, rich garden soil; they will grow vigorously. If desired for a house plant they may be transplanted into pots late in September, shaded for a few days, and then removed to a sunny window, where they will blossom properly for two months. Then keep them cool until spring, and repeat the operation till the plants become so large as to be unmanageable, when spring cuttings must be taken off and rooted.

The common variety is the *Salvia splendens*, which has rich scarlet flowers. *S. splendens variegata* is a novelty possessing finely variegated foliage, with flowers as brillant as the common kind. The roots of these two varieties can be hung up during the winter in a dry, dark cellar—like Geraniums; *S. Patens* is of a deep blue color, of the most perfect shade. It has a tuberous root, which can be kept like a Dahlia through the winter in sand.

SAMPHIRE. This plant, also called *sea-fennel*, is difficult to cultivate, and as it is not a native, is seldom procurable in our markets. Its leaves have a pleasant, crisp, aromatic flavor; the fleshy leaves and young branches are pickled in vinegar, and also used in salads in seasoning.

SANDWICHES.—To make good sandwiches the bread should be light, and not too stale. Cut it in thin slices, butter well on one side, and between the slices lay meat chopped fine or cut very thin; to beef or ham a little mustard is usually added. After being prepared the sandwiches should be piled together and kept between two plates, or in a sandwich-box. Instead of the sliced meat, potted meats, such as beef, veal, chicken, ham, or tongue, may be used; this method is preferable to the slices, as there in less difficulty in dividing them with the teeth.

Cheese Sandwiches.—Take two-thirds of good cheese, grated, and one-third of butter; and a little cream: pound all together in a mortar; then spread it on slices of brown bread or gems; lay another slice over each; press them gently together, and cut in small square pieces.

Egg Sandwiches,— Boil fresh eggs five minutes; put them in cold water, and when quite cold peel them, and after taking a little of the white off each end of the eggs cut the remainder in four slices. Lay them between bread and butter with a little pepper and salt.

Fried Egg Sandwiches.—Beat some eggs well; fry them in butter as a pancake. When cold, cut in small square pieces, and lay them between brown bread and butter.

Gem and Cheese Sandwiches.—Toast good cheese lightly; split wheatmeal gems in halves, and spread between two halves, so as to come to the edges all round, a slice of the toasted cheese. It makes a wholesome and palatable lunch; children are fond of it. Some object to toasted cheese. The principal objection to it is that it is generally toasted too much. If toasted dry, it is as hard to digest as a very hard-boiled egg. Another objection is, that it is too often eaten as a dessert with rich pie and cake, instead of with the principal part of the meal.

Omelet Sandwiches.— Take four eggs, two tablespoonfuls of bread crumbs, and one half ounce of chopped parsley. After beating the eggs well, add the bread crumbs, then the parsley, and two tablespoonfuls of water. Season, and fry it in small fritters, and when cold put them between brown bread and butter.

Pastry Sandwiches.—Divide equally in two, and roll off square and as thin as possible, some rich puff paste; lay one half on a buttered tin, or copper oven-leaf, and spread it lightly with fine currant, strawberry or raspberry jelly; lay the remaining half closely over, pressing it a little with the rolling pin after the edges are well cemented together; then mark it into divisions, and bake it from fifteen to twenty minutes in a moderate oven.

SANGAREE.—Properly speaking, sangaree is a punch very popular in the West Indies, composed of half Madeira wine and half water, acidulated with lime-juice and sweetened with sugar. It may be made, however, of any wine, in the same way. *Ale sangaree* is half ale and half water, sweetened. Add nutmeg to all.

SAPSAGO. (*See* CHEESE)

SARDINE.—A small fish of the herring family taken in large quantities on the coast of Sardinia, and in other portions of the Mediterranean Sea, also in the Atlantic ocean, on the coast of France. Sardines are sometimes imported in brine, but in almost all cases now they are preserved in oil, in small tin boxes, holding from half a pound to a pound, and containing in each on the average from a dozen to twenty-four fish. They are an excellent relish, and form a wholesome and agreeable addition to the breakfast, lunch, or supper-table. They should be served in the box and sliced lemon handed with them.

SARSAPARILLA.—A remedy which has alternately been extolled to the skies and fallen into complete neglect; lauded as a panacea at one time, it has been despised at another, both probably unjustly. The plant which yields it is a species of smilax, which grows in many parts of America, and in the West Indies. The part employed is the underground stem or rhizome, whence numerous long rootlets are given off.

The Jamaica sarsaparilla is the kind used in medicine; this comes in bundles about a foot and a half long, the roots being folded and not thicker than a goose quill; they are of a reddish brown color. The preparations of sarsaparilla are a simple and compound decoction, and a liquid extract. The compound decoction contains Jamaica sarsaparilla, Guaiacum, wood turnings, fresh liquorice root, and mezereon. This is the preparation most commonly used,

in doses of from two ounces to a pint. All kinds of properties have been attributed to sarsaparilla, diaphoretic, diuretic, tonic, and alterative; but it has been chiefly used as an anti-syphilitic. It seems, according to some trustworthy authorities, to do much good in the skin eruptions of syphilis, if taken in doses of not less than half a pint to a pint daily. It has also been used in some skin diseases, especially in those of a scrofulous origin, and in chronic rheumatism and gout. In all of these maladies, however, it has been customary to use the sarsaparilla merely as an adjunct to powerful remedies, and it has not always been quite clear what portion of the resulting benefit was to be attributed to sarsaparilla. If used at all, it should be used in large quantities, and in the form of freshly prepared decoctions, simple or compound.

SASSAFRAS.—A small tree common in the forests and barrens throughout a great part of the United States. Every part of the tree has a pleasant fragrance, and a sweetish aromatic taste, which is strongest in the bark of the root. These qualities depend upon an essential oil which may readily be extracted by distillation, and which is much used in medicine. The young shoots are a pleasant ingredient in *small beer*, and impart to it a pleasant flavor. The dried root in the form of chips is commonly sold in the drug stores. The action of sassafras is stimulant, and is supposed to be especially efficacious in chronic rheumatism and skin diseases. The mild decoction known as *sassafras tea* is a popular domestic remedy, and is believed to purify the blood.

Beer (Sassafras). (*See* BEER.)

Jelly (Sassafras).—Take the pith of sassafras boughs, break it in small pieces, cover it with cold water, and let it soak till the water becomes glutinous. It has the flavor of sassafras, and is generally much relished by the sick.

Tea (Sassafras).—Take the roots, either green or dried, boil them a few minutes in pure water, and then let them steep several hours; drink with milk and sugar, like ordinary tea. In many parts of the country this is a favorite "spring medicine," about a pint of it being drunk every day for a month.

SATIN.—A glossy silk twill of a peculiar description, the soft and lustrous face of which is given by keeping a large proportion, frequently as many as seven out of eight threads of the warp visible. In the manufacture of other silken stuffs each half of the warp is raised alternately; but in weaving satin, the workman only raises the fifth or eighth part of the warp, which, presenting an even, close, and smooth surface, is capable of reflecting the rays of light almost entire, and the fabric thus acquires that lustre and brilliancy for which it is famous. But this is assisted by another process: when first taken out of the loom satin is somewhat flossy and rough, and it is dressed by being rolled on heated cylinders which smooth down the face and increase the lustre. Some satins are quite plain, others are figured, and the latter are often of exquisite beauty. The Chinese excel in the production of figured satins; the best plain ones are made at Lyons. Usual width ¾ yard.

SATINET.—A thin flimsy kind of satin. Also a cloth made of cotton warp and worsted filling, much used for coat, cloak, and dress linings.

SAUCES. — Directions for making sweet sauces are given under puddings (*See* PUDDINGS), and most of the sauces that are served warm are described under the dishes which

Mushrooms, Eschalots, and Tomatoes.

they are intended to accompany. A considerable number of the sauces given below are what may be called *condiments*, though one important section of these latter are given under CATSUP, SALAD, and VINEGAR.

Almond Sauce. (*See* ALMOND.)

Anchovy Sauce. (*See* ANCHOVY.)

Bechamel Sauce.—I. Rub together in a sauce-pan, two ounces of butter and a heaped tablespoonful of flour; add gradually a pint of boiling milk, and stir over the fire until it thickens; remove and add the yolk of an egg well beaten with a teaspoonful of cold water; season with salt and white pepper, and serve at once.

II. Take equal parts of very strong pale veal gravy, and good cream (a pint each, for example). By rapid boiling reduce the gravy nearly half; next mix with part of the cream a tablespoonful of fine dry flour; bring the rest of the cream to a boil, add the flour and cream, and keep the whole stirred for five minutes over a *slow* fire; then add the gravy, stir and mix perfectly, and simmer it for a few minutes longer. All the flavor should be given by the gravy, in which French cooks boil a handful of mushrooms, a *few* green onions, and some sprigs of parsley; but a good bechamel can be made without them.

III. Put into a stew-pan two or three ounces of butter, a carrot, two small onions cut in slices, and a handful of nicely-cleaned mushroom buttons when these can be procured; stew slowly half an hour, or until the butter is nearly dried up, then stir in two tablespoonfuls of flour, and

pour in a pint of milk, a little at a time, shaking the stew-pan well that the sauce may be smooth. Boil gently for half an hour; add a little salt and cayenne; strain and reduce it if not quite thick enough, or pour it boiling to the yolks of two fresh eggs.

Bread Sauce.—I. Boil half a pint of new milk, and pour it, scalding hot, upon half a pint of the finest bread-crumbs; cover them closely with a plate, and let the sauce remain for twenty or thirty minutes; put it then into a delicately clean sauce-pan, with a small saltspoonful of salt, half as much pounded mace, a little cayenne, and about an ounce of butter; keep it stirred constantly over a clear fire for a few minutes, then mix with it a couple of tablespoonfuls of good cream, give it a boil, and serve it immediately. When cream is not to be had, use an additional spoonful or two of milk. The bread used for sauce should be *stale*, and grated down into extremely small crumbs, or the preparation will look rough when sent to table. Not only the crust, but all heavy-looking or imperfectly-baked portions should be pared off, and it should be pressed against the grater only so much as will easily reduce it to crumbs.

II. (With Onion).— Put into a very clean saucepan nearly half a pint of fine bread-crumbs, and the white part of a large *mild* onion cut into quarters; pour to these three-quarters of a pint of new milk, and boil them very gently, keeping them often stirred until the onion is perfectly tender, which will be in from forty minutes to an hour. Press the whole through a hair-sieve, which should be as clean as possible; reduce the sauce by quick boiling should it be too thin; add a seasoning of salt and grated nutmeg, an ounce of butter, and four spoonfuls of cream; and when it is of a proper thickness, dish, and send it quickly to table.

This is an excellent sauce for those who like a *subdued* flavor of onion in it; but as many persons object to any, the cook should ascertain whether it be liked before she follows this receipt.

Butter (Burnt or Browned).—Melt in a frying-pan three ounces of fresh butter and stir it gently over a slow fire until it is of a dark brown color; then pour to it two tablespoonfuls of good *hot* vinegar, and season it with black pepper and a little salt. This is an excellent sauce for boiled fish.

Butter (Melted or Drawn).—I. Put into a bowl a large teaspoonful of flour, and a little salt, then mix with them very gradually and smoothly a quarter of a pint of cold water; turn these into a small clean sauce-pan, and shake or stir them constantly over a clear fire until they have boiled a couple of minutes; then add an ounce and a half of butter cut small, keep the sauce stirred until this is entirely dissolved, give the whole a minute's boil, and serve it quickly. The usual mode is to put the butter in at first with the flour and water; but for inexperienced or unskilful cooks, the above plan is safest and best.

II. (French).— Pour half a pint of good, but not very thick, boiling drawn butter to the yolks of two or three fresh eggs, and stir them briskly as it is added; put the sauce again into the saucepan, and shake it high over the fire for an instant, but do not allow it to boil or it will curdle. Add a little lemon juice or vinegar, and serve it immediately.

III. (Rich.)—Mix to a very smooth batter a dessertspoonful of flour, a half-saltspoonful of salt, and half a pint of cold water: put these into a delicately clean saucepan, with from four to six ounces of well-flavored butter, cut into small bits, and shake the sauce strongly round, almost without cessation, until the ingredients are perfectly blended, and it is on the point of boiling; let it simmer for two or three minutes, and it will be ready for use. The best French cooks recommend its not being allowed to *boil*, as they say it tastes less of flour if served when it is just at the point of simmering.

IV. (White.)—Thicken half a pint of new milk with rather less flour than is directed for the common drawn butter, or with a little arrowroot, and stir into it by degrees after it has boiled, a couple of ounces of fresh butter cut small; do not cease to stir the sauce until this is entirely dissolved, or it may become oiled, and float upon the top. Thin cream, substituted for the milk, and flavored with a few strips of lemon-rind cut extremely thin, some salt, and a small quantity of pounded mace, if mixed with rather less flour, and the same proportion of butter, will make an excellent sauce to serve with fowls or other dishes, when no gravy is at hand to make white sauce in the usual way.

Caper Sauce.—I. Stir into a third of a pint of good drawn butter from three to four dessertspoonfuls of capers; add a little of the vinegar, and dish the sauce as soon as it boils. Keep it stirred after the capers are added; part of them may be minced, and a little Chili vinegar substituted for their own. Pickled nasturtiums make a very good sauce and their flavor is sometimes preferred to that of capers.

II. (Brown.)—Thicken half a pint of good veal or beef gravy and add to it two tablespoonfuls of capers, and a dessert-spoonful of the pickle liquor, or of chili vinegar, with some cayenne if the former be used, and a proper seasoning of salt.

III. For Fish.—To nearly half a pint of very rich drawn butter, add six tablespoonfuls of *strong* veal gravy, one tablespoonful of essence of anchovies, some Chili vinegar or cayenne, and from two to three tablespoonfuls of capers. When there is no gravy at hand, substitute a half wineglassful of mushroom or other catsup.

Celery Sauce.—Slice the white parts of from three to five heads of young tender celery; peel it if not very young, and boil it in salt and water twenty minutes. If for white sauce, put the celery, after it has been well drained, into half a pint of veal broth or gravy, and let it stew until it is quite soft; then add an ounce and a half of butter, mixed with a dessertspoonful of

flour, and a quarter of a pint of thick cream or the yolks of three eggs.

A very good common celery sauce is made by simply stewing the celery cut into inch-lengths in butter, until it begins to be tender; then add a tablespoonful of flour, which must be allowed to brown a little, and half a pint of good broth or beef gravy, with a seasoning of pepper or cayenne.

Chestnut Sauce.—Cover six ounces of shelled chestnuts with boiling water, and let them simmer about three minutes, when they may be easily peeled; stew them gently for an hour and a quarter in three gills of veal stock, adding a few strips of lemon peel. Press them, with the gravy, through a hair-sieve reversed and placed over a deep dish or pan, as they are much more easily rubbed through thus than in the usual way. Add a little cayenne and mace, some salt if needed, and about six tablespoonfuls of rich cream. Stir the sauce until it boils, then serve with boiled fowls or stewed veal cutlets.

Chili Sauce.—*Take:*-Ripe tomatoes (peeled and sliced), 10 lbs.; onions peeled and chopped) 2 lbs; green peppers (without the seeds), 7 oz; brown sugar, 6 oz; salt, 4 oz; vinegar, 1½ pts. Chop the peppers, boil all the ingredients together in a porcelain-lined kettle for several hours, or until as thick as desired; put it in air-tight cans, and use for soups and gravies.

Christopher North's Meat Sauce.—Throw into a small basin a heaped saltspoonful of cayenne pepper, half the quantity of salt, and a small dessertspoonful of sifted sugar; mix thoroughly; pour in a tablespoonful of the strained juice of a fresh lemon, two of Harvey's sauce, a teaspoonful of the best mushroom catsup, and a small wineglassful of port wine. Heat the sauce by placing the basin in a saucepan of boiling water. Serve it directly it is ready with geese or ducks, roast pork, venison, fawn, a grilled blade-bone, or any other broil. A slight flavor of garlic or eschalot vinegar may be given to it at pleasure. Some persons eat it with fish. It is good cold; and, if bottled directly it is made, may be stored for several days. It is the better for being mixed some hours before it is served. *The proportion of cayenne may be reduced, when a less pungent sauce is desired.*

Clarified Butter.—Put the butter into a very clean and well-tinned sauce or enamelled stew-pan, and melt it gently over a clear fire; when it just begins to simmer, skim it thoroughly, draw it from the fire, and let it stand a few minutes, that the buttermilk may sink to the bottom; then pour it clear of the sediment through a muslin strainer or a fine hair-sieve; put into jars, and store them in a cool place. Butter thus prepared will answer for all the ordinary purposes of cookery, and remain good for a long time. The clarified butter ordered for the various receipts in this volume is merely dissolved with a gentle degree of heat in a small saucepan, skimmed, and poured out for use, leaving the thick sediment behind.

Crab Sauce.—The flesh of a fresh crab of moderate size is more tender and delicate than that of a lobster, and may be converted into an excellent fish sauce. Mince it small, and add it to some good drawn butter, which has been flavored as directed for lobster sauce.

Cream Sauce (*For Fish*).—Directions for making this excellent sauce are given under Baked Salmon. (*See* SALMON.)

Cucumber Sauce.—Take two large fresh cucumbers; peel them, and cut them lengthwise into four or five pieces, and each piece into two; put them into a quart of water, with a tablespoonful of salt in it, and let them lie half an hour; drain them, take out the seeds, and put the cucumbers into a stew-pan, with half a pint of white stock, or gravy, a dessertspoonful of vinegar, and a teaspoonful of sifted loaf sugar; simmer half an hour, or till the cucumbers are soft. Beat the yolks of two eggs with a gill of cream; take out the cucumbers; stir the eggs and cream into the sauce, boil up, and pour it over the cucumbers.

Or, put the cucumbers, prepared as above, into a stew-pan, with a little sugar and butter, set it on the fire, and stir in some brown stock, and simmer till the cucumbers are tender; then take them out and thicken the sauce.

Dutch Sauce.—Put into a small sauce-pan the yolks of three fresh eggs, the juice of a large lemon, three ounces of butter, a little salt and nutmeg, and a wineglassful of water. Hold the sauce-pan over a clear fire, and stir the sauce until it *nearly* (but not quite) boils; a little cayenne may be added, if liked. A small teacupful of veal gravy, mixed with plenty of blanched and chopped parsley, may be used instead of water for this sauce, when it is to be served with boiled veal, or with calf's head.

Egg Sauce.—I. Boil four fresh eggs fifteen minutes, then lay them into plenty of fresh water, and let them remain until they are perfectly cold; break the shells by rolling them on a table, take them off, separate the whites from the yolks, and divide all the latter into quarter-inch dice; mince two of the whites tolerably small, mix them lightly with the yolks, and stir them into a third of a pint of rich drawn butter or of white sauce; serve as hot as possible.

II. Boil a couple of eggs hard, and when quite cold cut up the whites and yolks separately; mix them well, put them into a very hot tureen, and pour over them a quarter of a pint of drawn butter, boiling hot; stir and serve the sauce immediately.

Eschalot Sauce.—Take from half a pint to a pint of eschalots, divide them, strip off the skin, and when all are ready throw them into plenty of boiling water slightly salted; in five minutes drain this from them and pour in as much more, which should also be boiling; at the end of five minutes change it again; unless very large the eschalots will be tender in fifteen minutes, in which case the water must be poured from them shortly after it has been changed for

the second time. Drain them *well*, and mix them with white sauce or gravy, or with good drawn butter, and serve them very hot.

Fricassee Sauce.—Stir briskly, but by degrees, to the well-beaten yolks of two large or of three small fresh eggs, half a pint of common white sauce; put it again into the sauce-pan, give it a shake over the fire, but be extremely careful not to allow it to boil, and just before it is served stir in a dessert-spoonful of strained lemon-juice. When meat or chickens are fricasseed, they should be lifted from the saucepan with a slice, drained on it from the sauce, and laid into a very hot dish before the eggs are added, and when these are just set, the sauce should be poured on them.

Horse-radish Sauce. (*To serve hot or cold with roast beef.*)—Wash and wipe a stick of young horse-radish, scrape off the outer skin, grate it as small as possible on a fine grater, then with two ounces (or two heaping tablespoonfuls) of it mix a small teaspoonful of salt and four tablespoonfuls of cream; stir in briskly and by degrees three dessertspoonfuls of vinegar, one of which should be Chili vinegar when the horseradish is mild; serve. To heat the sauce, put into a small and clean sauce-pan, hold it over but do not place it *upon* the fire, and stir it constantly until it is on the point of simmering; but do not allow it to boil, or it will curdle instantly.

Lemon Sauce.—I.—Cut three slices of lemon into very small dice, and put them in drawn butter; give it one boil, and pour it over boiled fowls.

II.—Put the peel of a small lemon, cut very thin, into a pint of sweet cream, with a sprig of lemon-thyme and six white pepper-corns; simmer gently till it tastes well of the lemon; then strain it, and thicken it with a quarter of a pound of butter with a tablespoonful of flour rubbed in it; boil up once; then pour the strained juice of the lemon into it, stirring it well. Serve with boiled fowls.

Lobster Sauce.—Add to half a pint of good drawn butter a tablespoonful of essence of anchovies, half a saltspoonful of pounded mace, and less than a quarter of a saltspoonful of cayenne; if a couple of tablespoonfuls of cream should be at hand, stir them to the sauce when it boils; then put in the flesh of a small lobster cut into dice (or any other form) of equal size; keep the sauce-pan by the side of the fire until the flesh is quite heated through, but do not let the sauce boil again; serve it very hot; this is an excellent sauce for fish. A small quantity can be made on occasion with the remains of a lobster that has been served at table.

Maitre d' Hotel Sauce.—I. Mix a teacupful of cream, two ounces of butter, two tablespoonfuls of lemon-juice, a tablespoonful of chopped parsley, a tablespoonful of white sauce, a little cayenne, mace, black pepper, and salt; put all in a stew-pan and stir till hot and thick, *but do not let it boil.* This is one of the best of sauces for either fish or meats; pour it over the fish or joint before serving.

II. Cold.—Mix and knead well together in a bowl two ounces of butter, a tablespoonful of chopped parsley, and the juice of half a lemon; salt to taste, and use. Pepper and a grated nutmeg may be added, if liked. Vinegar may be used instead of lemon-juice, but makes an inferior sauce.

Mayonnaise Sauce.—Mix in a two-quart bowl, to allow room for beating, one even teaspoonful of ground mustard, and one of salt, with one and a-half of vinegar; beat in the yolk of a raw egg; then add gradually from the measure, holding it in the left hand, half a pint of pure olive-oil; pour it in the smallest thread-like stream, while with the other hand the beating is brisk and uninterrupted. The mixture will become a very thick batter. Flavor with vinegar or fresh lemon-juice. Closely covered, it will keep for weeks in a cold place. It is not only delicious, but is often of great service to invalids.

Mint Sauce.—The mint for this sauce should be fresh and young, for when old it is tough and indigestible. Strip the leaves from the stems, wash them, and drain them on a sieve, or dry them on a cloth; chop them very fine, put them into a sauce-tureen, and to three heaped tablespoonfuls of the mint add two of pounded sugar; let them remain a short time well mixed together, then pour to them gradually six tablespoonfuls of good vinegar. The sauce thus made is excellent, and far more wholesome than where more vinegar and less sugar is used for it; but after the first trial the proportions can easily be adapted to the taste of the eaters.

Persons with whom the mint in substance disagrees can have the flavor of the herb without it, by straining the above sauce after it has stood for two or three hours; the mint should be well pressed when this is done. The flavor will be more readily exhausted if the mint and sugar be well mixed, and left for a time before the vinegar is added.

Mushroom Sauce.—Trim the stems closely from half a pint of small button mushrooms; clean them with a little salt and a bit of flannel, and throw them into cold water, slightly salted, as they are done; drain them well, or dry them in a soft cloth, and throw them into half a pint of boiling *bechamel*, or of brown sauce made with very good stock, or nice gravy, thickened with a tablespoonful of flour and two ounces of butter. Simmer the mushrooms from ten to twenty minutes, or until they are quite tender, and dish the sauce, which should be properly seasoned with salt, wine, and cayenne.

Olive Sauce.—Remove the stones from fine French or Italian olives by paring the fruit close to them, round and round in the form of a cork-screw; they will then resume their original shape when done. Weigh six ounces thus prepared, throw them in water, and let them blanch for five minutes; then drain, throw them into cold water, and leave them in it from half an hour to an hour, pro-

portioning the time to their saltness; drain them well and stew them gently from fifteen to twenty-five minutes in a pint of very rich brown gravy; add the juice of half a lemon, and serve the sauce very hot. This sauce is especially nice with ducks or stewed fowls of any kind.

Onion Sauce (brown).—Mince the onions, stew them in two ounces of butter until they are well colored, stir in a dessertspoonful of flour, shake the stew-pan over the fire for three or four minutes, pour in only as much broth or gravy as will leave the sauce tolerably thick, season with a little cayenne, and serve it very hot.

Onion Sauce (white).—Strip the outer skin from some large white onions, and after having taken off the tops and roots, cut them in two, throw them into cold water as they are done, cover them plentifully with more water, and boil them very tender; then lift them out, drain and press the water thoroughly from them; chop them small, rub them through a sieve or strainer, put them into a little rich drawn butter mixed with a tablespoonful or two of cream, add seasoning of salt, give the sauce a boil, and serve it very hot.

Oyster Sauce.—Boil half a pint of small oysters with their liquor, in one pint of water until the flavor is well extracted, then strain, pressing the juice from the oysters, leaving them entirely worthless; next throw a pint of small fresh oysters in this liquor and stew until they are puffed; take them out, skim well, add four even tablespoonfuls of flour rubbed with four ounces of butter; stir until thickened, season with salt and white pepper; drop in the oysters and when hot serve the sauce immediately.

Parsley Sauce.—Take a few leaves of young freshly-gathered parsley, chop them tolerably fine, mix them with the required quantity of drawn butter (made as directed), and boil hard three minutes.

Piquant Sauce.—Brown lightly in an ounce and a half of butter a tablespoonful of minced eschalots or three of onions; add a teaspoonful of flour when they are partially done; pour to them half a pint of gravy or of good broth, and when it boils add three chilies, a bay-leaf, and a very small bunch of thyme. Let these simmer for twenty minutes; take out the thyme and bay-leaf, add a high seasoning of black pepper, and half a wineglassful of the best vinegar. A quarter of a teaspoonful of cayenne may be substituted for the chilies.

Shrimp Sauce.—Shell quickly one pint of perfectly fresh shrimps, and mix them with half a pint of drawn butter (made as directed), to which a few drops of essence of anchovies and a little mace and cayenne have been added. As soon as the shrimps are heated through, dish, and serve the sauce, which ought not to boil after they are put in. A few tablespoonfuls of cream will make the sauce richer.

Soubise Sauce.—Skin, slice, and mince quickly two pounds' weight of the white part only of some fine mild onions, and stew them in from two to three ounces of good butter over a very gentle fire until they are reduced to a pulp, then pour to them three-quarters of a pint of rich veal gravy; add a seasoning of salt and cayenne, if needed; skim off the fat entirely, press the sauce through a sieve, heat it in a clean stewpan, mix it with a quarter of a pint of rich boiling cream, and serve it directly. Serve with mutton chops, roast mutton, or boiled veal.

Tartar Sauce.—This is made as directed for Mayonnaise Sauce, with the addition of a teaspoonful of finely-chopped chives, green onions, or shalots, and gherkin. It should be served very cold.

Tomato Sauce.—I. Tomatoes are so juicy when ripe that they require little or no liquid to reduce them to a proper consistence for sauce; and they vary so exceedingly in size and quality that it is difficult to give precise directions for the exact quantity which in their unripe state is needed for them. Take off the stalks, halve the tomatoes, and gently squeeze out the seeds and watery pulp; then stew them softly with a few spoonfuls of gravy or of strong broth until they are quite melted. Press the whole through a hair-sieve, and heat it afresh with a little additional gravy should it be too thick, and some cayenne, and salt. Serve it very hot.

II. (Richer.)—Stew very gently a dozen fine red tomatoes, prepared as for the preceding recipe with two or three sliced eschalots, one or two chilies or a third of a capsicum (or in lieu of either, with a quarter of a saltspoonful of cayenne pepper), a few small dice of lean ham, and half a cupful of rich gravy. Stir these often, and when the tomatoes are reduced quite to a smooth pulp, rub them through a sieve; put them into a clean saucepan, with a few spoonfuls more of rich gravy, add salt if needed, boil the sauce, stirring it well for ten minutes, and serve it very hot. When the gravy is exceedingly good and highly flavored, the ham may be omitted: a dozen small mushrooms nicely cleaned may also be sliced and stewed with the tomatoes, instead of the eschalots, when their flavor is preferred, or they may be added with them. The exact proportion of liquid used is immaterial, for should the sauce be too thin it may be reduced by rapid boiling, and diluted with more gravy if too thick.

Turnip Sauce.—Pare, slice, and boil quite tender, one pound of sweet white turnips, press the water from them thoroughly, and pass them through a sieve. Dissolve a slice of butter in a clean sauce-pan, and stir to it 2 large teaspoonfuls of flour, or mix them smoothly together before they are put in, and shake the saucepan round until they boil: pour to them very gradually nearly a pint of thin cream (or of good milk mixed with a portion of cream), add the turnips with a half-teaspoonful or more of salt, and when the whole is well mixed and very hot, pour it over boiled mutton, veal, lamb, or poultry. There should be sufficient of the sauce to cover the meat entirely; and when properly made it improves greatly the appearance of a joint. A little cayenne tied in a muslin may

be boiled in the milk before it is mixed with the turnips. Jerusalem artichokes make a more delicate sauce of this kind even than turnips; the weight of both vegetables must be taken after they are pared.

Velouté Sauce.—Take equal parts of cream and good veal gravy, boil the latter down one-half, boil the cream also five minutes or so, and mix them together without any thickening.

White Sauce.—I. Boil gently in half a pint of good pale veal gravy a few very thin strips of fresh lemon-peel, just long enough to give their flavor to it; stir in a thickening of arrow-root, or of flour and butter, add salt if needed, and mix with the gravy a quarter of a pint of boiling cream. For the best kind of White Sauce, *see* BECHAMEL SAUCE above.

II. Cut and chop a knuckle of veal into pieces; put into a stew-pan a quarter of a pound of butter, two onions, a carrot, a turnip, three cloves, a blade of mace, and a sprig of thyme and parsley, tied to them; add a little water, set the pan over a sharp fire, and stir it until the bottom of the pan is covered with glaze; then fill up with three quarts of water, adding a teaspoonful of salt. Let it simmer an hour and a half, skimming it, and pass it through a hair sieve into a basin. In another stew-pan make a thickening of a quarter of a pound of butter and six ounces of flour, take off the pan, and stir till partly cold, when add the stock, and boil for a quarter of an hour; stir in half a pint of boiling milk; then stir and strain through a sieve into a basin, and stir it till cold.

For Brown Sauce use beef instead of veal, and put into the stew-pan with four onions, and butter, to be set upon the fire and drawn to a brown glaze, before filling up; and the milk must be omitted.

SAUER-KRAUT.—Cut fine, hard, white-hearted cabbage into shreds, as if for salad; strew over and amongst the shreds a handful of salt and a tablespoonful of cream of tartar, putting first a little water to them; a few carraway seeds may also be added. Then cover the shred cabbage with whole leaves, close the top of the vessel with a well-fitting wooden cover, lay a stone on the top, and put the vessel in a warm place, where its contents will turn sour; at the end of a week or so it will be ready for use. Cook it in a well-closed stone or earthen vessel, with butter, broth, and a little vinegar. A teaspoonful of capers, added when the cabbage is nearly done, is generally considered an improvement.

SAUSAGES.—Sausages and sausage-meat when made at home are so much more satisfactory in all respects than any that can be bought ready-made that the trouble of preparing them is more than repaid. Butchers generally, with an eye to economy, make sausage-meat of bad or tainted pork; and the so-called "country-sausages" many times contain meat which would be rejected by any well-fed animal. It is possible, of course, to procure good sausages from responsible butchers who manufacture for themselves, but it is best to reject any sausage-meat whose pedigree cannot be traced very directly. We append several good receipts for different kinds of sausages, which can be made at home with very little trouble.

I.—Take one-third fat and two-thirds lean pork; chop them very fine, or, better still, grind them in a sausage-mill; to ten pounds of the meat thus prepared add eight teaspoonfuls of pounded salt, ten of powdered and sifted sage, six of black pepper, two teaspoonfuls of cloves, two of powdered mace, and a little grated nutmeg. Work the seasoning in thoroughly with the hands, fry a little to see if they are satisfactory, pack in stone jars, pour melted lard on top, and keep in a cool dry place. When used, make up into cakes and fry over a brisk fire.

To prepare cases, where these are preferred, wash the intestines of the hog thoroughly and cut them into lengths of two yards each; turn them inside out, and again wash them thoroughly in warm water, scraping them with a scraper made for this purpose; throw them into salt water to soak till used. Great care will be necessary in cleaning cases to avoid tearing them.

II. (Willow Brook.)—To thirty pounds of sausage meat (one fourth fat) add eight ounces of salt, one and a half of summer savory, two and a quarter of sage and two of fresh ground pepper. Mix thoroughly.

III. Chop first separately, and then together, one pound and a quarter of lean veal, free from skin and sinew, a pound and a quarter of lean pork, and the same quantity of fat pork; mix well and strew over the meat an ounce and a quarter of salt, half an ounce of pepper, one nutmeg grated, and a large teaspoonful of pounded mace; turn and chop the sausages until they are equally seasoned throughout, and tolerably fine. Press them into a jar or pan, and keep them in a very cool place. When wanted for table, form them into cakes something less than an inch thick; flour and fry them for about ten minutes in a little butter.

Bologna Sausage.—Take equal portions of fresh pork, veal, and ham or salt pork,—chop them fine or grind, and mix together thoroughly; to nine pounds of the meat allow ten teaspoonfuls of powdered sage, two each of cayenne and black pepper, one grated nutmeg, one teaspoonful of cloves, one minced onion, and sweet herbs to taste; mix well, and stuff into beef intestines prepared as directed for those of the hog, (these may be obtained ready prepared of butchers); tie up both ends of the bag tightly, prick in several places, and boil slowly for an hour; then dry them in the sun, and hang them in a cool dry cellar, after rubbing the outside of the skins with melted butter. These are eaten without further cooking, and are very nice.

Fried Sausages.—Sausage-meat should be fried to a light crisp brown on both sides,—the fat in it is generally sufficient. Stuffed sausages must be turned about often to prevent bursting; they may be pricked slightly, but they are nicer when this is avoided and the juices are kept inside.

SAVELOYS.—Soak eight pounds of young fresh pork in strong salt and water, with a tablespoonful of saltpetre in it, for three days; dry it, and chop it up fine; season with four tablespoonfuls of powdered sage, thyme, and sweet marjoram, mixed, four teaspoonfuls of black pepper, one of cayenne, and one of cloves or mace; add a teacupful of bread-crumbs, mix together thoroughly, and stuff in skins prepared as directed under SAUSAGES. Bake in a moderate oven for half an hour, or steam over boiling water for an hour. This may be eaten either hot or cold.

SAVORY.—There are two varieties of this herb—the summer and the winter—both of which are used in cooking and in medicine. The aromatic leaves of the winter variety, both green and dried, are highly esteemed, and are used in seasoning soups, stews, dressings, stuffings, salads, broths, etc. Savory is also sold at the drug-stores, in a dried and pulverized state, done up in packages.

SAVOY.—A variety of the cabbage, generally considered the choicest of the species. It is sweeter and more tender than the others, especially the central leaves. It is a winter vegetable, and is in season from November till spring. The dwarf savoy is improved by frost, and the yellow savoy will bear very severe weather without injury. The green is most tender. (*See* CABBAGE.)

SCALD HEAD.—This is characterized by small contagious pustules appearing on the hairy scalp, generally in children, but capable of being communicated to adults. The pustules are small and irregularly round, containing a yellow matter, which scabs around the hairs, with a central depression corresponding generally with a hair. The health is usually slightly impaired, either as a cause or effect of disease, but there is no fever. Prior to the outbreak of the eruption there is generally some increase of the ordinary scurf, which is browner than usual.

Treatment.—Treat scald head exactly as directed for the second kind of ringworm, (*porrigo scutulata.* (*See* RINGWORM.)

SCALDS.—The only difference between burns and scalds is that the latter are produced by the contact of some hot or boiling fluid with the body and the former by some heated solid body, or flame. Both kinds of injury present the same appearances, are attended by the same constitutional symptoms, and require the same treatment; so that the directions given in the article on Burns apply equally to Scalds. (*See* BURNS.)

SCALLOPS.—These shell-fish, also called *scollops*, are in season from September to March, and are generally very plentiful in all markets where oysters are found. Only the muscular part or "heart," is eaten. This has a peculiar sweetness, which is somewhat like the flavor of a soft clam, but much more cloying and pronounced. Scallops are very savory when nicely fried, but some cannot tolerate the sweet flavor just mentioned.

Fried Scallops.—Boil scallops three minutes; put butter or lard in a frying-pan, and when melted, turn the scallops in; stir now and then, fry to a light brown, season with salt, pepper, and a little parsley chopped fine.

Pie (Scallop).—Like OYSTER PIE.

Stewed Scallops.—Wash off the slime in salt and water, rinse in clear water; cover with milk, and stew about fifteen minutes, or until tender; add butter rubbed with flour to thicken the sauce; then season with white pepper and salt, and serve hot, on toast if liked.

SCARIFY.—To make a number of small scratches, as with a lancet.

SCARLET FEVER or SCARLATINA.—An acute, febrile disease, producing a scarlet rash upon the skin, and often swelling of the glands. Contagion is the chief if not the only cause of scarlet fever; the poison may be retained in the clothes for a year and then give rise to the fever. Both sexes are equally liable to an attack; children between eighteen months and five years of age are most frequently attacked; no season has much influence upon it, but in this country it is perhaps most common in the winter. Scarlet fever may be very mild or malignant. The *symptoms* are vomiting, which frequently comes on while the child is at play; headache; shivering; and a feeling of depression and weakness as if the strength had entirely gone. Next day there is difficulty of swallowing, hot, dry skin, great thirst, the patient sighs frequently, and complains of pain like needles pricking all over the body. The rash now appears, (sometimes the earlier symptoms are so slight that the rash is the first thing noticed.) The rash consists of small scarlet dots, almost running together, so as to make the whole skin appear flushed; the color disappears on pressure, but rapidly reappears when the pressure is removed. (*This distinguishes scarlet fever from measles, with which it is often confounded in the earlier stage,—in measles the rash does not disappear under pressure.*) It generally appears first on the sides of the neck and the upper part of the chest, and in the bend of the joints; it then spreads downwards and comes out last on the legs. Measles appear first on the face. Sore throat is always present to a degree; there is redness and swelling of the tonsils and soft palate, so that it is very painful to swallow, while the glands beneath the jaw also swell and are painful. The temperature is much higher than in measles, and the pulse is very quick; moderate delirium and headache are often present. About the fifth day the scarlet color fades and turns brown, the skin becomes dry and harsh, and about the ninth or tenth day begins to peel off; this peeling may be completed in a few days or may continue several weeks. *Malignant Scarlet* Fever is characterized by an increased severity of the above symptoms; there is great prostration, delirium, and sleeplessness; the rash does not always come out well; the face may be livid, and a stupor comes on which ends in death; the throat is ulcerated, or cov-

ered with diphtheritic membranes, and the difficulty of swallowing is very great. The name of *Latent Scarlet Fever* is a form of the disease so mild that until the sequelæ appear one is not aware of having had the scarlet fever. There is no relation between the abundance of the rash and the danger to the patient; however mild the disease may be, the sequelæ may come on with great severity. Moreover one is just as liable to catch the fever from a mild case as from a severe one.

Sequelæ.—After the fever has passed there may follow a train of symptoms which are very inconstant in their character and very dangerous to the patient. The throat may continue to be affected, and the glands outside may inflame and swell; often these glands suppurate, and a raw ulcerated surface is then seen. Deafness may come on, and a discharge from the ear. Bronchitis and pneumonia are not so frequent as in measles. Sometimes convalescence is retarded by abscesses forming in various parts of the body; at other times there is a painful affection of the joints, which resembles rheumatic fever. Renal dropsy is also one of the most usual sequelæ, and exposure may result in Bright's Disease, which is often fatal.

Treatment.—Most cases recover in a week, except those which are malignant; the disease is much more dangerous to a pregnant woman, and hence women in that condition should be extremely careful not to go near a case of scarlet fever. The mild cases must be nursed simply; there is no remedy which will cut short an attack. The patient must be kept in bed, and have a milk diet; for drink, oranges, lemonade, raspberry-vinegar and water, or apple tea, may be given. Hot flannels, or cotton wool should be wrapped round the throat, and steam may be inhaled into the mouth. Sometimes a band of linen steeped in cold water and applied to the throat gives great relief. Exposure to cold too soon after an attack of scarlet fever is often a cause of the dropsy; the child should therefore be kept in the house for *at least five weeks* after the appearance of the rash and until the peeling is finished. If this precaution is observed the child will be less liable to give the disease to others. When dropsy comes on it shows that the kidneys are affected, and the patient must be put to bed again if he has been up previously; a hot bath and purgatives should also be given. Malignant cases of scarlet fever may end fatally in forty-eight hours; ammonia and brandy must be given when the state is one of great prostration. Gargles are not of much use to the throat; brushing the fauces over with tannin and glycerine, or with a solution of nitrate of silver, is often beneficial when done gently. In cases of discharge from the ear, the ear must be syringed with warm water three or four times a day, and a little cotton-wool pushed in the entrance. During convalescence tonics should be given, and for this purpose iron and quinine are the best remedies. Scarlet fever is very contagious. Therefore, never allow any clothes of a patient to be washed in the house, but always outside; do not pour boiling water on them and stand over the steam. After the fever is over, the sick-room and every article used in it should be thoroughly disinfected. This may be done by closing up the room air-tight, after removing everything wet or moist from it, and then burning sulphur in it—a few ounces on an iron pipkin or kettle with legs. Every person should leave the room after the sulphur is lighted, and it should be left closed for several hours. For disinfecting basins, chambers, etc., *see* DISINFECTANTS.

SCENT-BAGS. (*See* SACHETS.)

SCIATICA.—This is not a single disease, but a group of diseases of various kinds, always affecting the same region; that region is the lower portion of the hip and thigh, along which the sciatic nerve runs, whence the name. "True sciatica is a neuralgic affection, but numerous other maladies, especially of a rheumatic origin, have been mistaken for it. The sciatica rarely occurs in youth, and rarely begins in old age—most frequently it commences between forty and fifty. One kind of sciatica —of the truly nervous kind—is associated, especially in females, with hysteria, or other signs of a nervous temperament. Frequently these suffer from neuralgia in other situations. The sciatica which occurs in older persons very often follows on cold, damp, and fatigue. It is especially troublesome in men who have broken down under their exertions, and show signs of premature age. Sciatica occurring in these individuals is exceedingly intractable, and there are very frequently spots in the neighborhood of the great nerve that are exquisitely tender to the touch. In this form of paralysis, too, the motion of the extremities is interfered with. There is loss of power and motion, or any attempt at it gives rise to great pain. Besides loss of motor power there may be loss of sensation of the ordinary kind. There may be greater sensibility to mere touch, but the power of discrimination possessed by the skin is diminished."

Treatment.—Sciatica is to be treated chiefly by tonics. Steel and strychnine should be given and persevered in; they may not suffice to get wholly rid of the pain, but they will strengthen the constitution and so enable other remedies to be used with more advantage. "The strychnine may be given either as liquor strychnine (B. Ph.) (solution of strychnine), from five to ten minims for a dose, or the tincture of nux vomica in like quantity may be prescribed. Liquor strychnine is best when given along with iron. Of iron the two best preparations are the saccharated carbonates and the neutral chloride. The carbonate may be given in doses of 20 or 30-grains, the chloride in 20 or 30-minim doses. The liquor ferri perchloride may be used if the other is not obtainable. Arsenic is a remedy not to be overlooked in dealing with sciatic neuralgia,

especially if there is any likelihood of malarial complications. The preparation commonly employed is Fowler's solution, of which the dose is two or three minims, given immediately after food." Of the local means of relieving sciatica, the best is the hypodermic injection of morphia, especially over the spot where the pain is most severe; if the spot be very tender it may be necessary to use ether spray to alleviate the pain of the injection. The quantity injected should not in the first instance exceed one-fifth of a grain: but it may be shortly repeated if successful. A small blister over the painful spot, with some lead and morphia lotion to apply when the skin is removed will also do great good. Of course such a lotion must be very weak, and should only be employed upon a physician's prescription.

All forms of sciatica are apt to return, and so if a patient has once suffered from the malady he should take great care that it does not. To this end, over-fatigue, bodily or mental, should be avoided, and flannel worn constantly next the skin.

SCOLLOPS. (*See* SCALLOPS.)

SCORING.—In cookery this means the making of parallel incisions on the outside of a joint of meat intended for roasting, so that the substances used in basting may penetrate the meat more easily. It should be done with a sharp knife, and the incisions should not exceed a quarter of an inch in depth.

SCORZONERA.—This is a variety of the oyster-plant, and is prepared, cooked, and served in the same way. (*See* OYSTER-PLANT.)

SCOURING. (*See* CLEANING, GREASE, and STAINS.)

SCRAPPLE.—This is a Pennsylvania dish, and deserves to be better known; for when well made it is an excellent substitute for meat at breakfast. To make, procure a young pig's head, perfectly fresh, weighing five or six pounds (get the butcher to take out the eyes and teeth); cut off the ears in order to clean them well inside; put the head and ears into two gallons and a half of cold water, and let it boil till the bones can be easily separated from the meat; then take it out, chop the meat *very* fine, put it back into the liquor in which it was boiled, and season moderately with salt, pepper, sage, thyme, and sweet marjoram, then take equal parts of buckwheat and Indian-meal and stir them in until the compound is about the consistency of mush; *lift it off the fire while thickening to keep it from being lumpy;* then let it boil for about fifteen or twenty minutes, stirring to prevent burning. Turn it into pans to cool, and keep it in a cool place; it will keep several weeks in cold weather. When wanted, cut it into thin slices and fry to a crisp brown.

SCRATCHES.—Treat these as directed for abrasions. (*See* ABRASION.)

SCREENS.—Folding screens are now little used, since the construction of our houses has been so much improved. Still there are cases where they will add much to comfort, particularly in defending those who are obliged to sit between the door and the fire, where there is always more or less of a current of air. These screens have hinges, by which they can be folded into different positions. *Fire screens* are very necessary where open fires are used. In dining rooms they are particularly wanted for those who sit with their backs to the fire; and various contrivances have been made to prevent the unpleasant effects of this situation. The simplest is a mat made of willow that is hung on the back of each chair requiring such defence. A *cheval fire-screen* is one made of mahogany, filled in with moreen and other materials, and made to slide up in the stand. Fire screens for parlors are made light and elegant, and are generally only large enough to screen the face. That a pane of glass should form an effective fire-screen is a remarkable fact. It appears that although the heating rays as well as the light of the sun can readily pass through glass, the heat rays of fire are almost entirely stopped by it. On this principle, a piece of window or plate-glass can be made into a fire-screen by enclosing it in a frame; and this is both agreeable and convenient, since the fire may be seen through it.

SCROFULA.—A constitutional condition generally inherited from one or both parents, and increased by bad feeding in early life. The most characteristic features of a scrofulous individual are—a heavy figure, dull, pasty complexion, with a prominent upper lip and a coarse mould of countenance; mind and body lazily disposed, nostrils expanded, and nose rather turned up. When children, they are very liable to inflammation of the eyelids, giving a red, angry look to the part, while most of the eyelashes are absent; often, too, the glands enlarge, and more especially those under the jaw and in the neck; this swelling comes on from a common cold, or in the course of an illness, and sometimes the gland breaks up into an abscess, which points and leaves, after recovery, a nasty seamed scar; such people generally have several of these scars, from abscesses having formed at different times. Eczema is another condition to which scrofulous people are very subject when young; it appears on the head and behind the ears; discharges from the ear, ear-ache, and deafness are not uncommon symptoms. Bronchitis, inflammation of the lungs, and perhaps consumption may ensue. Nor do the intestines escape, for on any slight irritation, diarrhœa is apt to come on. Sometimes the mesenteric glands in the abdomen swell, and this may be associated with dropsy and chronic inflammation of the peritoneum. Nor are diseases of the joints uncommon, and these may go on for months and years, or be very distressing to the patient, being accompanied by discharge of matter and disease of the bone. Scrofulous people are, therefore, liable to a great many diseases in consequence of their constitutional malady. As a rule, persons subject to this affection ought not to marry, as their offspring will be more or less affected; marriage between cousins thus af-

fected should be strongly reprehended. The general health of such people may be much improved by careful feeding in childhood, cod-liver oil, sea-bathing, and an out-door country life.

SCURF.—This is a popular term applied to those cases in which the skin comes off in scale. The most frequent seat of the affection is the heads of children, where branny scales are shed. Washing the part daily with soap and water, or once or twice a week with camphor-water will usually cure it. A popular mode of treatment is to bruise a bunch of rosemary, pour a pint of boiling water over it, and use this warm every morning as a wash. Sometimes this disease is called Scurvy, which is quite a wrong designation.

SCURVY.—Scurvy or scorbutus arises from a state of mal-nutrition, following the use of a diet which is deficient in fresh vegetable matter. It is most common among sailors, because on long voyages they have so much salt food and no fresh vegetables; yet it may occur among landsmen, and several severe outbreaks have been known of late years in England and Scotland. Soldiers are very liable to suffer from it, and in fact any one may be attacked whose regular diet is deficient in fresh vegetables. The *symptoms* of scurvy are, first, a change in the color of the skin, which becomes pale or sallow; then the mind becomes listless, and the patient is averse to taking exercise; there are pains about the limbs, and so the sufferer is glad to lounge about and rest himself. Gradually purplish spots appear, especially about the legs and thighs; then larger patches form, as if several of these smaller patches had run together; often the patient looks as if bruised. The lips are pale, the face becomes bloated, and the conjunctivæ of the eyes are swollen and red. The gums, at first pale, begin to swell so as to encroach upon and almost envelop the teeth; they then become spongy, dark-red, or livid, not painful, but disposed to bleed when irritated. Sometimes the teeth are loosened and fall out, and there is a sickening fœtid odor from the breath. Chewing is now rendered impossible, and even liquid food is swallowed with difficulty. Often swellings occur in various parts of the body, usually near the bend of a joint. Fainting frequently follows upon the least exertion, and this is dangerous, as death may result. In bad cases ulceration of the skin comes on, and may spread rapidly, and be attended with dangerous bleeding.

Treatment.—This must consist in supplying the patient with the substance, by the deficiency of which his disorder was produced. It is surprising how, even in bad cases, an immense improvement may be produced in a few hours by giving lime-juice. Amongst other vegetables which may be given are oranges, lemons, cabbage, lettuce, potatoes, onions, mustard, and cress, dandelion, sorrel, scurvy-grass, and grapes. An ounce of lime or lemon-juice should be given daily when vegetables are scarce. The other articles of diet must be such as are easy of digestion, and no salt meat whatever must be allowed. The following suggestions have been issued by the London Board of Trade for the information of shipowners and shipmasters:—

"Every ship on a long voyage should be supplied with a proper quantity of lime or lemon-juice.

"The juice, having been received in bulk from the vendors, should be examined and analyzed by a competent medical officer. All measures adopted for its preservation are worthless unless it be clearly ascertained that a pure article has been supplied.

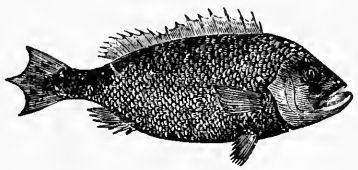
"Ten per cent. of brandy (spec. grav., 930), or of rum (spec. grav., 890) should afterwards be added to it.

"It should be packed in jars or bottles, each containing one gallon or less, covered with a layer of oil, and closely packed and sealed.

"Each man should have at least two ounces (four tablespoonfuls) twice a week, to be increased to an ounce daily if any symptoms of scurvy present themselves.

"The giving out of lime or lemon-juice should not be delayed longer than a fortnight after the vessel has put to sea."

SEA-BASS.—In season from May to October. The small fish are excellent for frying or broiling. (*See* BASS.)



SEA-KALE.—A plant growing along sandy shores, the young shoots, leaf-stalks, and ribs of the leaves, skinned or peeled, are very agreeable food. In season during spring.

Boiled Sea Kale.—Wash, trim, and tie the kale in bunches, and throw it into plenty of boiling water with salt in it; boil it about 20 minutes, or until tender, then lift it out, drain it well from the water, and send it to table with good drawn butter. It may also be served upon toast, like asparagus.

Stewed Sea-Kale.—Boil the kale ten minutes in salt and water; drain it well, and put it into a saucepan with as much good brown gravy as will nearly cover it; stew it gently for ten minutes or until it is tender, and send it to table in the gravy very hot. Another excellent mode of serving this vegetable is to boil it in salt and water, and pour over it plenty of rich white sauce after it is dished.

SEA-SICKNESS.—There are few maladies, probably, which produce such an aggregate of human suffering as sea-sickness; and there is none which the medical profession has done so little to relieve, or for which it is so seldom consulted. The treatise of Dr. Fordyce Barker, which was published in New York a few

years ago, has been generally accepted both at home and abroad, as the most valuable discussion of the subject yet produced; and it is from that that the substance of the present article is drawn. Many theories have been suggested in explanation of the cause of sea-sickness, but Dr. Barker considers it due to the sudden and recurring changes of the relations between the fluids and the solids of the body, and the nervous disturbances which result from these changes. The liquids contained in their vessels, as well as the solids of the economy, obey equally the laws of gravitation, when the body is subjected to alternate movements of ascent and descent like those which are caused by the swing or by the waves of the sea. The blood, by reason of its fluidity, yields more readily to the influence of descent, and less easily than the solids to the ascending impulse; consequently, it does not return to the brain with the same regularity as is the case when the body remains stable, while it leaves it more rapidly in the movement of descent. There result, as to the circulation, alternatives of afflux and delay in the arrival of the blood to the different organs of the body, which disturb their functions, and those of the brain in particular. This shows the folly of attempting to cure sea-sickness by medication addressed to the stomach, or even by drugs which are supposed to act directly upon the brain and its functions. Sea-sickness is manifested by a great diversity of symptoms in different individuals. Some suffer only from headache and a constant feeling of stricture across the forehead and over the temples, during the whole voyage, while they are free from nausea and vomiting. Others do not suffer much from nausea, but are suddenly seized with vomiting, and, after the contents of the stomach are discharged, they are free from all unpleasant sensations until the next recurrence of vomiting. With many, the nausea and vomiting entirely disappear after being at sea for a few days. Others again are so unfortunate as to suffer from all these symptoms during the whole time they are at sea, whether the voyage be short or long. There are some who never can become habituated to the sea. There is often a great change in the same individual, in the course of life, as to the susceptibility to this malady. Some, who in early life have been martyrs to sea-sickness, have ceased to feel it as they have grown older; while others who have been so exempt from liability to it that they have been accustomed to regard it as an affection which can be overcome by an effort of the will, have become most pitiable victims. And yet it is curious that strong mental emotions, as terror or fright, will suddenly and completely cure the most violent sea-sickness.

Treatment.—With regard to the prevention and treatment of sea-sickness, Dr. Barker makes the following suggestions:—In short passages, as on our lakes, and across the English or Irish Channel, all that can be done is by way of prevention. Those liable to be sick should make a good hearty meal not more than two or three hours before going on board. They should select a spot as near as possible to the centre of the vessel, and lie down before she gets under weigh. The horizontal position should be rigidly kept during the whole passage. Any attempt to raise the head or to stand erect will be sure, with the susceptible, to be followed by an explosion, and then the case is hopeless for the remainder of the passage. The person should be well covered, not only to protect from cold, but to shield from disagreeable sounds, sights, and smells. On the packets on the English Channel it is best not to go down into the cabins below, where the sight of those lying round, with basins by their heads is of itself exceedingly provocative to a sensitive stomach, but rather to secure, by telegraphing beforehand, one of the little cabins on deck. Although the passage may not be more than an hour and a half or two hours, neglect of the above suggestions is apt to be followed by very severe punishment. For ocean passages one of the most essential points is the selection of the state-room as regards position, light, size, and ventilation. Of course, the nearer the room is to the centre of the ship, the less will be the motion. In going to Europe, it is better to be on the starboard side, and in returning on the port side, which will be the sunny side. Rooms near the furnaces are objectionable, not only on account of the heat, which is sometimes very disagreeable, but also from the noise, which, at certain hours, is made by the donkey-engine in drawing up the ashes and cinders, and which is very trying to those of sensitive nerves. In screw-steamers, the inside rooms, as they are called, if of good size, are often to be preferred to the outside ones, on account of ventilation, as there is very little weather, except in remarkable summer passages, when the port-holes can be kept open, while the windows of the inside rooms open on deck, and can generally be kept open. As the air draws down the gangway, the nearer the gangway the better the ventilation.

The following suggestions for the prevention of sea-sickness were first written out by Dr. Barker some years ago for a gentleman whose business required him to cross the Atlantic often, and who was always kept in his room by severe sea-sickness during the whole voyage. By implicitly following the directions given, he has suffered very little from sickness, and has been able to go on deck by the second or third day, and has been entirely exempt from sickness for the remainder of the voyage. They have since been copied many times, and their value thoroughly tested. The trouble, however, is, that most persons do not appreciate how much easier it is to prevent sea-sickness than to cure it; and so, none but those who have before suffered will thoroughly carry out the directions, and, neglecting some of them, are disappointed in the results:

1. Have every preparation made at least twenty-four hours before starting, so that the

system may not be exhausted by overwork and want of sleep. This direction is particularly important for ladies.

2. Eat as hearty a meal as possible before going on board.

3. Go on board sufficiently early to arrange such things as may be wanted for the first day or two, so that they may be easy of access; then undress and go to bed, before the vessel gets under weigh. The neglect of this rule, by those who are liable to sea-sickness, is sure to be regretted.

4. Eat regularly and heartily, but without raising the head for at least one or two days. In this way, the habit of digestion is kept up, the strength is preserved, while the system becomes accustomed to the constant change of equilibrium.

5. On the first night out, take some mild laxative pills, as, for example, two or three of the compound rhubarb pills, and be careful to keep the bowels open the remainder of the voyage.

Most persons have a tendency to become constipated at sea, although diarrhæa occurs in a certain percentage. Constipation not only results from sea-sickness, but in turn aggravates it. The reason has already been given why cathartics should not be taken before starting. The effervescing laxatives, like the Seidlitz, or the solution of the citrate of magnesia, taken in the morning on an empty stomach, are bad in sea-sickness.

6. After having become so far habituated to the sea as to be able to take your meals at the table and to go on deck, never think of rising in the morning until you have eaten something, as a plate of oatmeal porridge, or a cup of coffee or tea, with sea-biscuit or toast.

7. If subsequently, during the voyage, the sea should become unusually rough, go to bed before getting sick. It is foolish to dare any thing, when there is no glory to be won, and *something* may be lost.

In addition to the careful observance of the above directions, Dr. Barker recommends those liable to sea-sickness to provide themselves with the following prescriptions, as they may give very considerable comfort and relief at a very trifling expense:

LAXATIVE PILLS.

℞ Pulv. Rhei. (Turc), ℥ ss.
Ext. Hyoscyami, ℥ j.
Pulv. Aloes Soc.,
Sapo Cast., āā gr. xv.
Ext. Nux Vomicæ Alcoh., gr. x.
Podophylin p., gr. v.
Ipecac., gr. ij.
M. ft. pil, (argent) No. 20.
S. Dose—one, two, or three.

For most persons two pills will be sufficient to take the first night at sea, and afterward, when a laxative is necessary, one is ordinarily all that will be required.

In some, while at sea, there is a tendency to diarrhœa instead of constipation, and the following will be found a useful medicine in controlling this symptom. It may also be found of service when travelling on land and exposed to the ills which result from change of diet, bad water, etc. The dose given is for an adult. For a child, one year old, ten drops; two years, fifteen drops, and so on. The medicine may be put up wherever an English druggist (or chemist as he is called in Europe) is found, as in most of the large towns on the Continent:

℞ Tinct. Camphoræ, ℥ vj.
Tinct. Capsici, ℥ ij.
Spts. Lavendul. Comp.,
Tinct. Opii, āā ℥ ss.
Syr. Simp., ℥ ij.
M. S. A small teaspoonful in a wineglass of water after each movement.

In cases where the sickness has been prolonged for several days, the patient suffering from constant nausea, great nervous depression, and sleeplessness, great benefit may be derived from the following powders:

℞ Potass. Bromide, ℥ j.
Div. in Chart No. 20.

S. One, two or three times a day. These powders are best taken in a half-tumbler of carbonic-acid water (ordinarily called soda-water), or, if this cannot be obtained, in a half-tumbler of iced sugar-and-water. This should be sipped down slowly, so that the stomach may be persuaded to retain and absorb it. One powder, taken at bedtime, will often secure a night of good refreshing sleep. The powders should be kept in a tin box, or in a wide-mouthed phial.

Those who are confined to their berths for several days often suffer from local pains, cramps, "stitches in the sides," and sometimes colics. These pains are often relieved by the use of the following liniment, which is to be applied not by rubbing, but by thoroughly saturating a double thickness of flannel, and laying it directly over the seat of pain, and then covering the flannel with the clothing to prevent evaporation. The liniment at first causes a sensation of coldness, then of great heat, and soon after it gives a feeling of great relief. The flannel may again be wet with the liniment, as often as may be necessary, avoiding such a continued use as to cause a blister:

℞ Lint. Sapo Comp., ℥ vj.
Chloroform, ℥ j.
M. S. Chloroform Liniment.

Counter-irritation over the pit of the stomach, is often very serviceable in relieving the nausea and vomiting, and so it is well for those who are about to make a voyage, to provide themselves with the article, now generally kept by druggists, and known as "mustard-leaves." Any size required can be cut off, and, by simply wetting it, a mustard-plaster is ready at once.

SEDATIVES.—These are medicines which primarily depress the vital powers without inducing any previous excitement. But the only remedies of this class which are at all safe to be trusted in the hands of non-professional persons are tobacco and diluted hydrocyanic acid. The former of these is only manageable by means of smoking, which even if prejudicial as a general practice, may sometimes be indulged in with advantage. Hydrocyanic acid is a violent poison in large doses, but in the very small doses, recommended below, it may be given without risk in the sickness which accompanies pregnancy, or in other ordinary cases in which a sedative is required.

(*a*) Diluted hydrocyanic acid, 2 or 3 minims; syrup of orange-peel, 1 drachm; distilled water, 1 ounce, mix, and give occasionally, the intervals never being less than six hours.

(*b*) Diluted hydrocyanic acid, 2 drachms; glycerine, 3 to 6 drachms; water, 7 ounces. Mix, and use as a lotion, *taking great care that it is not drunk by mistake.* Good for itching.

SEED-BED. (*See* HOT-BED.)

SEED-CAKE (*See* CAKE.)

SEIDLITZ POWDERS.—These are a gentle laxative, and one of the most useful of domestic remedies. Nearly all druggists have their own receipts for the preparation of these powders, though the ingredients are substantially the same. The following receipt is a good one:—two drachms of Rochelle salts and two scruples of bicarbonate of soda in a white paper; thirty-five grains of Tartaric acid in a blue one. Dissolve the contents of each paper (separately) in nearly half a tumblerful of water, pour them together, and drink immediately, while the effervescence is at its height. Syrup mixed with the water makes it more agreeable.

SELTZER WATER, (*Home-made.*) Have ready a half-pint bottle with a metallic capsule, which fits hermetically close. Fill the bottle with clear water up to the neck, and throw into it a dram of tartaric acid and a dram of bicarbonate of soda, both in powder; screw on the capsule as promptly as possible. In a quarter of an hour it is fit for use. It may be drunk unmixed, like soda water, and it is also greatly relished in summer if poured into a tumbler with a few teaspoonfuls of syrup, or a glass of wine at the bottom.

SEMOLINA.—A preparation from wheat-flour, made by removing part of the starch. It is chiefly composed of the gluten of wheat, mixed with a small proportion of starch, and is converted by art into small round grains resembling sago, though its granules are more angular in shape than those of the latter. It is very nourishing, and less constipating than ordinary wheat-flour. It is used for thickening soups, and also is prepared like sago for invalids.

SENNA.— As used in medicine, senna is of two kinds, the so-called Alexandrian or Egyptian senna, and East Indian or Tinnevelly senna. The substance is the leaf of various species of cassia. They all have a peculiar odour, and all, if examined, will be seen to have one side shaped differently from the other at the base of the leaf where it joins the stalk. Alexandrian senna usually contains, as imported, the leaf of a totally different plant, which is irritating and gripes a good deal. This is usually removed by hand before it is sold, and the senna is spoken of as picked.

East Indian senna has a leaf very much larger than the Alexandrian kind. In some samples the leaves are broken and mixed with what may be considered impurities. Senna readily yields its virtues to water. These are said to depend on a substance in senna called cathartine, but this is by no means certain. Its preparations are a confection, infusion, mixture, tincture, and syrup. The confection is a good, useful preparation, consisting of senna, coriander, tamarinds, cassia pulp, prunes, extract of liquorice, and sugar. It is useful in piles. The mixture, best known as *black draught*, contains sulphate of magnesia (Epsom salts), extract of liquorice, tincture of senna, tincture of cardamoms, and infusion of senna. The tincture contains, besides senna, raisins, caraway, and coriander; the syrup, coriander and sugar. Senna is hardly ever given as powder, the infusion is most commonly employed, except among children, where the tincture or syrup takes its place. About an ounce may be given of the infusion, the same of the mixture, and of the confection a dram or more. The syrup is given to children in the dose of a dram or more.

Senna, as is well known, is a purgative, stimulating the motion of the bowels, and also aiding slightly in promoting their flow, but a salt of some kind, Epsom or Rochelle, is generally added to increase its efficacy in this way. Senna is seldom given alone, as it is apt to gripe, and for this reason spices are usually administered along with it. Senna is more generally used than any other purgative when it is simply desired to have the bowels cleared out, as it is apt to leave no ill consequence behind. It should not, however, be given if there is any tendency to inflammation of the bowels.

SERGE. — A twilled stuff of various colors, and used for the trimming of cloths, particularly cloaks. One sort has one side smooth and the other woolly; the longest wool is chosen for the warp and the shortest for the woof, the former being more twisted than the latter. *Silk serge* is a twilled silk used chiefly by tailors for trimming parts of gentlemen's coats. One yard wide.

SERPENT (*See* SNAKE.)

SERVANTS. — There are few subjects in which housekeepers are so keenly and permanently interested as the management of domestic servants, and none, perhaps, concerning which so much has been said and written. To pick up any book on domestic economy and see the number of pages devoted to the discussion of this topic, and the amount of good advice which they contain, one finds it difficult to account for the fact that, notwithstanding it all, our household service has steadily gone from bad to worse, until it is now the one unmitigated

and apparently immitigable evil in a housekeeper's life. Probably the extreme difficulty of making suggestions which shall be at once practical and capable of general application, explains the general vagueness of such advice and its tendency towards moral exhortation. In the present article we shall not consume our space in urging upon employers the necessity of courtesy and forbearance toward servants, for we do not think that Americans often err in this matter on the side of severity or lack of complaisance; nor shall we enlarge upon the danger of making a sort of confidential companion out of a servant, for this also we believe to be an altogether exceptional practice. In our opinion, the chief cause of the sort of veiled antagonism which unquestionably exists between employers and servants is, aside from the lack of training and indisposition to learn on the part of the latter, the perverted view which employers, especially mistresses, take of the conditions of domestic service. In spite of all that is said about the "privileges" of servants, and the advantages of their position, as compared with most manual workers, there is a general disposition to regard them as owing not only a peculiar deference but a sort of personal allegiance to their employers. A frequent example of this is seen in the sense of grievance with which most mistresses regard a servant's leaving a "good home" for another "place," when the only inducement is higher wages, or less work, or more convenient or pleasant surroundings. But the most striking example of it is the general disposition to regard the comparatively high wages now demanded (and obtained) by domestic servants as a species of imposition almost amounting to wickedness. Now the truth is that as to personal behavior, the relation between employer and servant is, or should be, exactly the same as that between an employer and a carpenter, mechanic, or clerk; the obligation to be polite is mutual and co-extensive, as binding upon one as upon the other, and with no variation as to degree. As to the high and increasing wages, that can be explained very simply, for it is in accordance with one of the most thoroughly-established principles of political economy. Owing to the very rapid progress of this country in population and wealth, the demand for household servants has increased at a rate much greater than that of the supply; the natural and inevitable result being a higher valuation of the labor performed by such servants. In demanding higher wages, in fact, servants are simply availing themselves of social conditions which they could neither produce nor influence.

It is to be observed, however, that, owing to special circumstances, this excess of demand over supply has resulted in giving American servants an advantage in their relations with employers by no means inevitable, and of which they have, as was to be expected, made a very disagreeable use. And here we can present a consideration, drawn from the experience of another country, which we believe to be of great practical value. In England, the conditions of which we have spoken are exactly the same as in our own country: that is, the demand for household servants is greatly in excess of the supply. Higher and constantly increasing wages have been the result there as here, but at this point the parallel ceases and the attitude of English servants toward their employers is very different from that surly independence, amounting in many cases to aggressiveness, which is perhaps the most distinguishing trait of the corresponding class here. There, it is the servant who dreads a "notice," not the mistress as with us; and dismissal is a punishment which means something besides the inconvenience of packing a trunk and spending an hour or two in an intelligence office. The cause of this immense difference in the position of servants in the two countries is to be found simply in the different practice of employers with respect to what are called "Characters" in England, and "References" in this country. It would never occur to a respectable English housekeeper to employ a domestic servant who was not well recommended from his (or her) last place; and the consequence is, that dismissal without a "Character" is equivalent to permanent loss of employment, or, at best, to employment under conditions which almost preclude the possibility of again rising to a respectable position. So terrible is this punishment, that it is not uncommon for a servant to offer to work on good behaviour for six months or even a year, merely to obtain the forfeited "Character" at the end of that time. It is not difficult to perceive how powerfully such a custom operates both as a check and an incentive. The laxity of American practice with respect to "References" is almost incredible. We believe it to be less than the truth to say that nine tenths of the servants employed are engaged without any such examination into their references as can make the process of the slightest value; and that at least one half are engaged without being required to present any references at all. Even when they are demanded, such "References" are accepted as prove conclusively that they are regarded as a mere meaningless formality. We have ourselves had a woman answer an advertisement bringing with her a recommendation *twelve years old*: she acknowledged that she had in the meantime been to Chicago, St. Paul, and California, and yet she went away highly indignant at the suggestion that her "Character" was a trifle stale, taunting us as she went with the information that she had got two places on it without any insults being put upon her. After an experience which has included many servants we can recall but two cases in which any of them asked for a reference on leaving. Of course the natural result of all this is that a dismissal is one of the most trifling incidents in an American servant's life; and the great inducement to good behavior and intelligent work, which, under other circumstances, self-interest would bring, is thereby entirely lost. To sum up this

branch of the subject we shall suggest two rules which, if they were put in practice and rigidly adhered to by every housekeeper, would bring about such a revolution in the relations between employers and servants as would amount to a reversal of the respective positions of the two in respect to those matters in which, as we have said, the servants have an unmistakable advantage. The rules are: 1. *Never employ a servant who cannot bring explicit and thoroughly satisfactory references from his (or her)* LAST *place.* 2. *Never give a servant either a written or verbal recommendation which does not convey your real impression of his (or her) character. If the servant have been dismissed, give the exact reasons for the dismissal.* The second rule is not less important than the first, for unless it is scrupulously observed, "References" become an additional difficulty rather than a safeguard.

Of the specific complaints against servants, the one most frequently heard perhaps is that they lack training and undertake work which they are in no sense qualified to perform, while at the same time they are too stupid to learn. When we call to mind, however, the class from which household servants in this country are recruited, the wonder is, not that they exhibit untrained ignorance, but that they can cope with their work at all,—work which, in the case of a cook at least, is as complex, difficult, and delicate as a human being can undertake. In point of fact, too, such a complaint is as much an accusation against the mistress as against the servants. Trained skill implies some one who has trained it. When a carpenter wants an apprentice, a merchant a clerk, or a physician an assistant, he trains the lad fixed upon up to the desired point; and it never occurs to him to complain that without such discipline the lad "lacks training." So every housekeeper should understand that the condition of having trained servants is, and in the great majority of cases must be, to *train them;* and from the determination to do this she should not allow herself to be turned aside either by the intractableness of her subjects, or by their assumption of superior knowledge. It is not possible, perhaps, to make servants truthful, good-natured, courteous, docile, and honest; but it *is* possible, in most cases, to train them to do the work required of them in an intelligent and efficient manner. A housekeeper should not be satisfied with merely "getting along" with her servants; she should have a standard of cookery up to which the cook should be trained, a standard of waiting to which the waiter should be required (that is, taught) to attain, and so of the lady's-maid and all other servants. If it be objected that this involves an amount of knowledge on the part of mistresses of the household which, in fact, few of them possess, the answer is that a lady who undertakes the management of a household without the knowledge requisite for managing it rightly ought not to be surprised, and certainly has no right to complain, if her servants also undertake work which *they* are not qualified to perform. The truth would seem to be, indeed, that the lack of training on the part of servants is far more often due to the ignorance or indifference of mistresses than to the incapacity of the servants themselves; and as this ignorance or indifference is not likely to be soon removed, probably no more truly beneficent work could be undertaken than that of establishing training-schools or institutions where young girls could be trained to domestic service *before entering upon it.* Should such institutions become numerous enough to fairly establish a standard in this department of work, and effect (as they undoubtedly would effect) the introduction to it of a more intelligent class of workers, they would contribute as scarcely anything else would to the happiness of American family life.

But before a really intelligent class of workers,—such a class, for instance, as used to furnish the "help" of old New England households—can be induced to adopt domestic service as a regular and permanent employment, some concessions will have to be made in the matter of personal liberty. Even with such servants as we have now a vast deal of trouble arises from what the servants are hardly wrong in regarding as impertinent interferences and petty tyrannical exactions on the part of their employers. It would be well if it were clearly and generally understood that the authority of the master and mistress of a house in regard to their domestics extends simply to the things which the latter have contracted to do and the hours during which they have contracted to serve; beyond this they have no more right to interfere with the disposal of their time than with that of any clerk or mechanic whom they employ. They have, of course, a right to regulate the hours and work of their own household, and servants can choose between conformity to such regulations and loss of their situation; but within reasonable limits, the right of servants to come and go at their own discretion, in their own time, should be unquestioned; and their own time should be admitted to include all that remains *after* they have done the work which they contracted to do, or which their position naturally involves. Even in regard to the matter of visiting and visitors, which is perhaps more perplexing than any other, it is rapidly becoming the custom in England to hold servants responsible for the company they keep in the same way as for their general conduct and their performance of their work, without dictating special terms or conditions; and such would seem to be the most reasonable arrangement. In short, a household servant should be recognized as one who has contracted to do certain specified or well-understood work, and when she has done it her obligations to her employer and his rights over her cease,—that is, with the qualifications above indicated.

There is one other point, attention to which would do much to make domestic service pleasanter, and by so much to elevate its character.

The position of contemptuous inferiority to which servants feel themselves consigned, and which in this country at least they are certain to resent, is indicated not so much by what is done as by what is left undone. Everything and every place designed for their use is generally not only inferior to, but in marked contrast with, the rest of the house. Their rooms are nearly always ill-furnished, incommodious, and neglected; and the kitchen is usually the most cheerless and comfortless place in the house, while its deficiency in cooking-apparatus and other conveniences is, as a general thing, a disgrace to American housekeeping. It is not to be expected, of course, that servants shall share in all the luxuries of the family; but their rooms should be at least comfortable, and if some pains are taken to make them attractive and tasteful, the effect will certainly be good. Pleasant surroundings in this respect have an important influence doubtless in attaching good servants to their homes and making them satisfied to remain long in one place, while at the same time doing more to create in them habits of order and cleanliness than any amount of mere verbal teaching. As to the kitchen, it is plainly not less to the interest of employer than of servant that the room in which the most important work of the house is carried on should be light, cheerful, comfortable, and supplied with at least all the appliances which can facilitate or improve labor. (*See* KITCHEN.)

All English books on domestic economy, and one or two American ones which follow their prototypes too closely, give elaborate directions for the division of the work of the household between the different servants; but this seems to us a matter which must of necessity be left to the individual housekeeper. We would suggest, however, that where two or more servants are employed, the duties of each should be clearly marked out, and the division rigidly adhered to; it will save much misunderstanding and confusion. Above all things we would urge the systematization of the household work. System will be found to be not only one of the most efficient of labor-saving devices, but an invaluable element in the training of both mistress and servants.

Law of Master and Servant. — A contract for a term of service extending beyond one year is not valid unless in writing. If at the time of hiring no term of service is specified, either party may terminate the contract at his option, unless there be a usage or custom to the contrary, which the parties may be presumed to have contemplated at the time the contract was entered into. Where the contract is for a certain term, and the servant is discharged without cause before its expiration, the master is liable in damages, the usual measure of which is the rate of wages stipulated for in the contract. On the other hand, the general rule is that if a servant, under a contract to serve for a specified time, leave the master without cause before its expiration, he forfeits all claim for wages. As if one enters into a contract to serve six months, at so much per month, and leaves at the end of three months without cause, it seems that he thereby forfeits all claim for wages during the time he has served. So also if a servant misconducts himself and is discharged by the master for a justified cause, it has been held that he forfeits all claim for wages since the last payment. But if the servant is unable to perform his contract on account of sickness, he is entitled to wages up to the time he ceased labor. The rule is the same if he departs for a justifiable cause, or if the contract is dissolved by the consent of both parties. It is the duty of the servant to obey all lawful and reasonable orders of the master, and if he neglect or refuse, the master is justified in discharging him. So, also, if he misconducts himself in such a way as to injure his master's business, or commits a crime, or is in the habit of becoming intoxicated. It is the duty of the master to provide suitably for the wants of his servant, but in case of sickness he is not bound to furnish medical attendance or medicines. If he does so, he is not entitled to deduct the expense from the wages of the servant without his consent. If the servant suffer an injury from any of the risks incident to his employment, or from the negligence of a fellow servant, the master is not liable.

SETONS. — By a seton is meant a long wound artificially made under the skin, the walls of which wound are kept in a state of irritation and suppuration by the presence of some foreign body. It differs from an issue in being a tubular wound *under* the skin and not an *open* ulcer. A seton may be established by transfixing a pinched-up fold of skin by a large flat needle armed with a strand of cotton or silk thread, or by passing a bistoury through the base of the fold and then carrying the thread through the canal thus made, by means of a small-eyed probe. After the thread has been allowed to remain at rest for two or three days and has set up irritation and some discharge, it is pulled a little further through the wound so that a fresh portion may be included and the soiled portion be cut away. This manœuvre is repeated every second or third day, and when the strand is almost used up a fresh strand is attached and substituted for it. Instead of cotton or silk thread many surgeons use a small flat band of india-rubber, which is less liable to become clogged by dry and offensively smelling discharge. Setons are established for the purposes of setting up counter-irritation, and of causing a chronic discharge so as to produce a drain upon the system. With the former object in view they are often useful when applied to the temple in some affections of the eye, and to the back of the ear in cases of deafness. As a means of producing a constant drain upon the system a seton is often established in old people who are threatened with an attack of apoplexy, or who suffer from constitutional disturbance in consequence of the closing by

cicatrization of a large chronic ulcer. Chronic abscesses and tumors with fluid contents are often treated by the introduction of a long strand of silk thread. As the fluid flows slowly away from the orifices of the seton, irritation is set up in the walls of the sac, which contract, and are finally glued together by inflammatory conditions.

SEWERS.—The common drains by which the water and filth of large towns and cities are conveyed away. The drains of houses communicating with them should be trapped on the *outside*. It is an imperative condition of the safety of every household that its own soil-pipes and outlet drains, and the sewer or cesspool to which they lead, should be thoroughly and completely ventilated with a current of air. (*See* DRAINAGE and SINKS.)

SHAD.—Shad are seldom or never found alive in the markets, as they die a few minutes after being taken out of the water. When fresh, their gills are of a bright crimson, the body is firm, and the scales very bright; when the eyes are sunken, and the gills have begun to turn a whitish blue, the fish are unfit to eat. Shad appear in the Southern waters (whence they are brought North) as early as the 1st of February, and by the 20th are generally plentiful; in the Delaware River they are first caught about the 20th of March; in the Hudson River, about the 1st of April; in the Connecticut River, about the 15th of April. They are

in season till June. The usual weight is from three and a half to five pounds each. The roes are considered by some superior to the fish itself; the male has roes, or rather a melt, which is very delicate. Shad are found salted and smoked; those cured in Connecticut are considered best.

Baked Shad.—Select a large shad, wash and scrape it clean, taking off all the scales, and wipe it dry; make a dressing of bread-crumbs, a little chopped parsley and pork, salt, pepper, and butter; fill up the shad with the stuffing, sew it up and lay it into a baking-pan with a little water in it; lay on it some small bits of butter or thin slices of salt pork, and dredge on a little flour; bake about forty minutes, basting well. When the shad is done, dish it, and add to the gravy a good lump of butter, a little hot water, a little browned flour and some salt and pepper; boil it up once and turn it over the fish. Garnish with parsley and sliced lemon.

Boiled (Fresh) Shad.—Select a roe shad for boiling. Prepare the fish as directed above, cleansing the roes thoroughly; sprinkle both fish and roes with salt, and wrap them in separate cloths and put them side by side into the kettle; cover with salted water, and boil steadily from fifteen to twenty minutes, according to the size. Dish with the roes arranged around the fish, and garnish with capers and slices of hard-boiled eggs. Send a sauce-boat of drawn butter mingled with chopped parsley and egg to table with it.

Boiled (Salt) Shad.—Soak the shad several hours in warm water, changing it three or four times; wipe with a coarse cloth so as to get off all the salt crystals, and soak in very cold water for an hour; then put it into the kettle with enough cold water to cover it, and boil fifteen or twenty minutes. Serve on a hot dish, with a good lump of butter spread over the fish.

Broiled (Fresh) Shad.—**I.** Scale and scrape a shad, split it down the back, wash it well and wipe dry; sprinkle it with salt and pepper, lay it flesh downward upon the gridiron and broil it ten minutes or until brown; then turn the other side downwards and broil ten minutes. Serve on a hot dish with some butter spread over the fish.

II. (*Whole.*) Clean and wash the fish with care, but do not open it more than is necessary; fill it with the same stuffing directed for baked shad, or with oyster stuffing, or any other made of bread-crumbs, and with its own roe; then sew it up, wrap it in a thickly buttered paper, and broil it gently for an hour over a slow fire. Serve it with caper sauce, or with Chili vinegar and melted butter.

Broiled (Salt) Shad—Soak the fish as directed for boiled (salt) shad, wipe it very dry, and boil as directed for fresh shad.

Fried Shad.—Clean, wash, and dry a roe shad; split down the back, and divide each side into four pieces, leaving out the head and removing the fins and tail; fry to a light brown on both sides in plenty of boiling lard or dripping—cooking the roe with it. Serve catsup with it.

Roast Shad.—Scrape, clean, wash, and wipe dry; tie the fish round with twine; spread salt, pepper, and melted butter (with a brush) all over the fish, wrap it in a well-buttered paper, and set it on the spit to roast; baste it well with a little melted butter, and remove the paper about five minutes before it is done. Dish the fish, cut off the twine, and serve with either caper or Mayonnaise sauce.

SHADDOCK.—This is a variety of the same species as the lemon and orange. In its native country, China, it is a sweet, pleasant fruit, with very little acidity; but in the West Indies, where it is extensively cultivated, it has degenerated into a sour, bitter fruit, scarcely tolerable to the palate. It contains abundance of juice, which, diluted, is used as a beverage and in making punch. Though less agreeable in its flavor, it keeps fresh and good longer at sea; hence it is valuable. It also makes good preserves. Those which are heavy and soft are usually best. The shaddock is very similar in appearance to the orange, but much larger; it is often found in our markets about the same time as Havana oranges.

SHAGREEN.—A valuable kind of leather, used often for spectacle, instrument, and other

cases; it is a singular manufacture, brought chiefly from Astracan. To make it, the strong skin which covers the crupper of the ass or horse is chosen; this is soaked in water and the hair taken off; it is then scraped until it is extremely thin, and while still wet and soft, the hard round seeds of a plant called goose-foot are strewed over it and trodden deeply into it, which causes it to become very hard and covered all over with hemispherical indentations; the surface is then scraped until the holes have nearly disappeared, after which the leather is again soaked, which cause the indentations to rise and produce a rough granular surface. The leather is now dressed with oil, dyed of a green color, and allowed to dry. Lastly, the grains or projecting warts are rubbed down till the whole is perfectly level, when the shagreen presents the beautiful appearance of white spots on a green ground.

SHALLOON.—A light, loosely-woven woollen stuff with a twill, much used for lining various articles of dress. It is of various colors. Width from 32 to 36 inches.

SHALLOT.—A plant of the onion family, but resembling garlic in being divided into several cloves enclosed in a skin. Its flavor is more pungent than that of either garlic or onion, but more agreeable. It is employed in flavoring soups, stews, salads, vinegar, etc., the largest bulbs being best for this purpose. The new shallots are found in the markets about midsummer, but they are not used in the green state; in the dry state they may be kept throughout the year, and they are generally sold thus in bunches.

"SHAMMY." (*See* CHAMOIS-SKIN.)

SHAVING.—Every one who has shaved knows how desirable it is to shave with comfort, and to do this proper apparatus is essential. The great point is to have a razor with a keen, smooth edge. Good razors are made concave or hollow between the back and edge, on both sides, for better security in shaving, and for the purpose of giving them a better edge in setting or stropping. Good strops may be purchased of any cutler, but a more satisfactory one may easily be made as follows:—Take a piece of wood perfectly flat on both sides, and glue on one side a strip of thick buff leather, on which spread a composition made of equal parts of black-lead in impalpable powder, and strong mercurial ointment; the lead should be the Spanish lump, scraped very fine, the powder of the shops being impure and gritty. Strop the razor well after using it, *not before*, and there will be no necessity to wipe it until it is again wanted, the composition effectually preventing rust in any climate. This stropping, with occasional use of the hone when the edge becomes dull, will be sufficient to keep a keen edge on the razor for a long time. When using the strop or hone, keep the razor perfectly flat, press lightly upon it, and draw it diagonally from the heel to the point, the whole length of the strop or hone, turning the elbow in and out every time the razor is turned.

To *sharpen* or *set* a razor, put it for half an hour in water to which has been added one twentieth of its weight of muriatic or sulphuric acid; then slightly wipe it off, and after a few hours *set* (strop) it on the hone. The acid here supplies the place of a whetstone, by corroding the whole surface uniformly, so that nothing more than a smooth polish is necessary; the process never injures good blades, while badly hardened ones are frequently improved by it.

The hone should be frequently moistened with oil, and kept in a place where it will not readily become dry. Rubbing the hone previous to use with soap instead of oil, gives a surprising keenness and smoothness to the edge of the razor. Keep the razor-strop moderately moist with a drop or two of sweet oil; a little crocus and a few drops of sweet oil rubbed well in with a round glass bottle will give the razor a fine edge. The "Diamond Paste" sold in the shops for sharpening razors is simply coke ground to an impalpable powder.

Razor Paper is an invention designed to supersede the use of the ordinary strop. By merely wiping the razor on the paper, to remove the lather after shaving, a keen edge is always maintained without further trouble; only one caution is necessary,—that is, to begin with a sharp razor, and then the paper will keep it in that state for years. It may be prepared thus: First, procure oxide of iron (by the addition of carbonate of soda to a solution of persulphate of iron), well wash the precipitate, and finally leave it of the consistency of cream; secondly, procure some good paper, soft, and a little thinner than ordinary printing-paper; then, with a soft brush, spread over the paper (on one side only), very thinly, the moist oxide of iron; dry it, and cut the paper into pieces two inches square; it will then be fit for use.

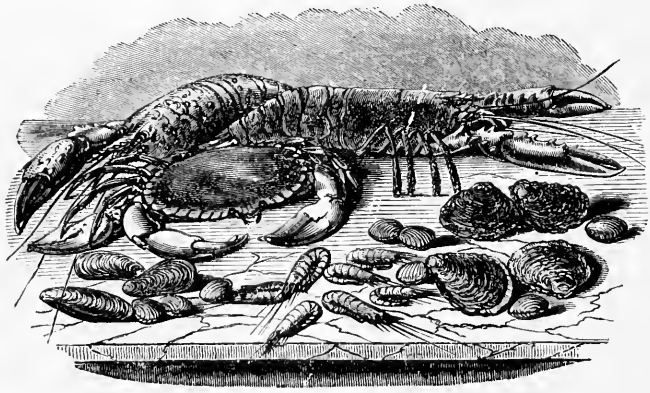
Of no less importance than the razor is the softening of the beard, which is too often neglected. First wash it well in *cold* water. (Hot water opens the pores and makes the face tender.) Then rub dry with a towel. Then apply the lather. The soap is generally rubbed to a lather with a brush; but many prefer to wet the beard and then rub the cake of soap on the face, making the lather with the brush on the skin; this is the most effectual way when the beard is very strong. After the operation, the face ought to be washed with *cold* water and the razor wiped dry either with a cloth or a piece of chamois-skin; the razor is usually dipped into hot water before using, but this is a practice not always necessary. Those who, after shaving, are affected by frosty air, will find a solution of nitre in soft water take off every unpleasant sensation; and, instead of the shining and parchment-like appearance consequent on greasy applications, produce softness and abate all swelling. Or, at first, use a little spermaceti ointment, at night, and the next morning; afterwards frequently wash the parts affected with the solution of nitre.

Of the ordinary *shaving-soaps*, Naples soft soap is a fish oil (mixed with Lucca oil) and potash, colored brown; it retains, when pure, its natural fishy odor. Rypophagon soap, used as a dentifrice, as well as for shaving, consists of the best yellow soap and fig soft soap, perfumed with anise and citronella. We have found the small flat cakes, called Yankee soap, as satisfactory as any other. Instead of soap some use *shaving-paste*, which may be made by melting together one drachm each of almond oil, white wax and spermaceti: beat them up with rose-water and a square of Windsor soap. *Essence of soap*, which is excellent for shaving, is made by dissolving as much fine, dry, white soap in spirits of wine as the spirits will take up, and perfuming it with any essence; the mixture should be placed near the fire, and if all the soap does not dissolve, pour off the liquid and keep it for use. For shaving, the brush should be dipped in, and a few drops of water being thrown upon the brush, it will make a fine lather. A good liquid of this kind may be made by dissolving eight ounces of castile soap in a pint of spirits of wine.

SHAWLS.—These popular articles of dress are manufactured in such numberless varieties, most of which are so well known, that it would be useless to attempt to treat of them all here; but a few suggestions respecting the Cashmere or Indian shawls may be useful to those intending to purchase. A real Cashmere shawl, made by the inhabitants of that Indian valley from the wool of a peculiar variety of goat, reared on the plains of Thibet, is a most costly article. To make a pair of large and handsome Cashmere shawls requires the labor of fourteen men for half a year. The down is collected from flocks of goats on the plains of Thibet, and brought to the confines of Cashmere on the backs of sheep. It is then cleaned and one fourth of it (being all that is fitted for the shawls) is carried on men's backs the remainder of the distance to Cashmere. When arrived thither, it passes into the hands of the merchants, who sell it in small quantities to the weavers, at the rate of about two rupees per pound. The thread is dyed a great variety of colors, and then stiffened with rice water. Many articles are woven with these colored threads, the process being slow and tedious, on account of the rude construction of the looms. The shawls are washed after being woven, to remove the rice stiffening; and a fine pale yellow color is imparted by means of sulphur fumes.

The prices paid for Indian shawls, especially those woven in Cashmere, have sometimes been almost fabulous. A full-sized shawl, such as is called in America a *long* shawl, ordinarily commands in Paris or London from $500 to $5000. Scarfs and square shawls, being smaller, sell for less. It is a mistake, however, to suppose that all these shawls are manufactured in India in the shape in which they are sold here. Generally, indeed, the centres and borders are brought over separately, and are put together afterwards in sizes and patterns to suit customers. Moreover a large portion of the shawls sold as real India ones are actually made in France; for the Thibet goat was introduced into that country more than thirty years ago, and the Cashmere shawls are imitated with considerable skill. Judges of the article say, however, that the real India shawl can be detected by its having a less evenly woven web, as also from its brighter colors. It is likewise said that the border of the genuine India shawl is invariably woven in small pieces, which are afterwards sewn together, as the whole border is subsequently sewn on the centre.

The French *Broché* shawls and the English Paisleys are imitations of the India shawls, but woven in one piece; they are rich and elegant, and less expensive than the genuine Indias.



SHEEP. (*See* KIDNEYS, LAMB, MUTTON, SUET, and TONGUES.)

SHEET. (*See* BEDS AND BEDDING.)

SHELL FISH.—This is one of the most highly appreciated divisions of the fish tribe. It comprises a vast number of species, in its

two classes of crustaceans and molluscs, which are not used as food; those used as food are *crabs*, *crayfish*, *clams*, *cockles*, *lobsters*, *muscles*, *oysters*, *periwinkles*, *prawns*, and *shrimps*, all of which are treated of, fully, under their respective names. All shell-fish are very liable to decomposition, and when this takes place they are extremely injurious to health, frequently producing severe bilious derangement, and in some cases a most troublesome eruption, similar to nettlerash. When quite fresh, however, they are wholesome, and easily digested by sound stomachs; but they are never suited to invalids, with the exception of the oyster, which is light and yet nourishing, and can often be taken by them when any other animal food would be rejected. American shell-fish are unequalled elsewhere in the world.

SHERBET.—The favorite Eastern beverage among wealthy Mohammedans, to whom the Koran forbids the use of wine. It consists of water and the juice of fruits, with sugar, and is flavored with spices and perfumes.

The name is, however, applied to another compound, made as follows: Put into a large bowl one pound of loaf sugar and the juice and rinds of three lemons; pour over them a quart of boiling water, and let them stand all night. Next day strain the liquor through a cloth, add to it five pint bottles of currant wine, and one of rum; mix well all together, and bottle off for use; it will keep a long time. When wanted, mix with cold water in a tumbler. This is a very refreshing summer beverage.

Cream Sherbet.—Put the yolks of six eggs and a dessert-spoonful of orange-flower water into two quarts of cream. Boil it up once in a covered stew-pan, then strain it. Add three-fourths of a pound of fine loaf sugar, and stir till dissolved. When cold set it in ice, or freeze same as ice cream.

Lemon Sherbet.—Dissolve a pound and a half of loaf-sugar in a quart of water, take nine large lemons, wipe them clean, cut each in halves, squeeze them so as to get out both juice and some of the essence of the peel, stir into it the sugared water, strain and freeze same as ice cream.

Strawberry Sherbet.—Take one pound of best ripe strawberries, crush them to a smooth mass, then add three pints of water, the juice of one lemon and a tablespoonful of orange-flower water. Let this stand three or four hours. Then put in another basin a pound of best refined sugar, stretch over it a cloth or napkin, and strain on the sugar the berries, squeezing out the juice as much as possible. Stir until the sugar is dissolved, then strain again, and set in ice an hour before serving, in small tumblers.

SHERRY.—A strong, full-bodied, Spanish wine, and one of the most popular of all wines. Sherry, in general, is of an amber color, and when good it has a fine aromatic odor, with something of the agreeable bitterness of the peach-kernel. When new, it is harsh and fiery, and requires to be mellowed in wood for four or five years. There are two kinds of sherries, the pale and the brown; the latter are colored by the addition of some cheap must or wine which has been boiled till it has acquired a deep brown tint. The pale sherries were formerly preferred, being supposed to be more pure; but the brown are now getting most into fashion. The inferior sherries are often adulterated with a cheap light wine called *Mogner*, and are strengthened by brandy; in fact it is extremely difficult now to procure a sherry to which a considerable quantity of brandy has not been added. The well-known *London Dock Sherry* has been found by recent analysis to contain from twelve to twenty-five per cent. Two dry sherries are highly esteemed in Spain, *Amontillado* and *Manzanilla*, they are said to be entirely devoid of brandy, and equally free from acidity; but they are seldom brought to this country. The Amontillado, when genuine and old, fetches a high price, and is sometimes added to improve the ordinary sherries by its nutty flavor. Most of the sherries sold in this country are manufactured here or in England.

If bought in the cask, sherry may be much improved by fining:—Draw off one gallon; dissolve two ounces of isinglass to a jelly and put in the wine; then add the whites of ten eggs with the shells, and one ounce of alum boiled in a pint of water; beat together well and return to the cask. Sugar-candy or honey will give sherry softness.

Sherry should be kept in a dry, cool place, and drunk at the temperature thereby imparted to it.

Sherry-cobbler.—I. Put plenty of finely broken ice into a large tumbler; pour in two wineglassfuls of sherry and a good tablespoonful of powdered white sugar, with a few small bits (not slices) of lemon; stir with a wooden spoon.

II. To make a quantity of sherry-cobbler, take a bowl and lay several slices of pine-apple, cut in quarters, in the bottom; sprinkle well with sugar, add pounded ice; add a handful of strawberries or raspberries, and not quite half a teacupful of powdered sugar; fill the bowl nearly half full of pounded ice, add two limes, slice them and pour in a bottle of sherry. Stir up the ingredients from the bottom until all are thoroughly mixed; in serving put a slice of each kind of fruit in each glass.

SHIRTS.—The principal parts of a shirt are the body, the sleeves, and the bosom; there are, besides, the yoke, the collar, cuffs, gussets, bands and tongue.

The measurements for this garment must be made with great accuracy. Faults in the fit of a shirt may be ascertained by noticing the wrinkles that have formed in it after a day's wear. The most common faults are that it is not cut out enough in the neck, and that it is too long on the shoulders and too broad across the breast. The first of these faults,

causes the bosom to gape and to bulge; the two latter cause wrinkles and creases around the arms.

The following are the measurements required: 1. The length of the garment; this measure is taken from the nape of the neck and may be longer or shorter at will, preferences varying in regard to the length of a shirt; 2. The length of the bosom; for this, two measurements are made, the first, directly in front from the base of the neck to the waist, the second, from the top of the shoulder at the neck, to the same point of the waist; 3. The breadth of the chest, from one arm to the other; 4. The size of the neck (mark this in full, and also mark one third of it); 5. The length of the sleeve (measure down the inside of the arm, and allow two inches more for the length on the outside); 6. The size of the wrist (taken loosely).

We will now for greater accuracy assume certain dimensions. Let us suppose the length of a shirt to be a yard and an eighth; the length of the sleeves, five-eighths of a yard; and three-eighths sufficient for yoke, collar, etc. This will require 3¼ yards of material, seven-eighths wide. From this quantity, enough for a medium sized shirt, we cut off what is to be used for sleeves, yoke, etc., and we have left for the body 2¼ yards, double the assumed length, that is, since the shirt is made of two breadths. Now fold this across in the width, but leaving one breadth four inches longer than the other, and cut them apart. The longer breadth will form the back of the shirt; the shorter, the front.

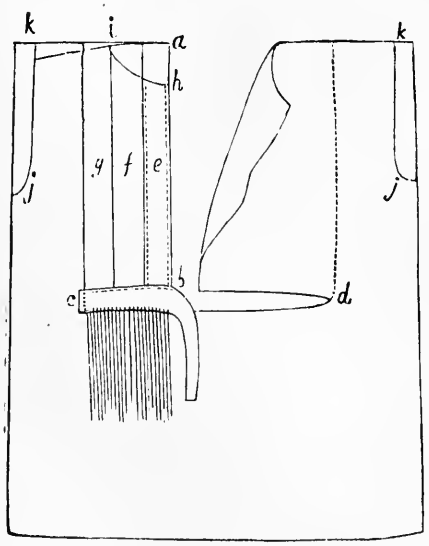


Fig. 1.

We will now prepare the front half of the shirt. (Fig. 1.) We take the shorter breadth and begin by making ready the bosom. For this we cut a slit, *a b* down directly in the middle, commencing at the top of the breadth and making the slit the length indicated as the second measure of the length of the shirt-bosom; we will suppose this measure to be 20 inches. From the bottom of this slit we then cut across on each side, *b c*, *b d*, leaving uncut on the outside a space of six or eight inches. The edges of the slit *a b*, are now to be turned down and hemmed, the hem being about an inch wide; that on the right will later have the buttons sewed on it, that on the left, *e*, is to be stitched as indicated by the dotted lines, and will have the button-holes made in it.

We then make two or three plaits at the side of each hem, and hold them in place by basting-threads at top and bottom. In the figure they are represented by the letters *g* and *f*, on the left side; the right half being left in course of preparation to make the explanation clearer. The plaits being made on both sides, we cross the hems over the other, the stitched one outside, and hold them in place with pins or stitches at top and bottom until the neck has been cut out, which cannot be done until the back and front of the shirt have been put together.

We now gather the lower edge of the transverse slit *c d*, and lay the gathers, and then fasten them so as to make the gathered space of the same length as the breadth of the shirt-bosom. We then prepare two little strips, about an inch wide, to cover this gathering: turn the edges of each strip and baste one on the outside of the shirt, half upon the bosom and half upon the gathering. This band is then secured in its place by a row of stitching across the upper edge, and by being hemmed down upon the gathers across the lower edge. The other strip is then put on the wrong side

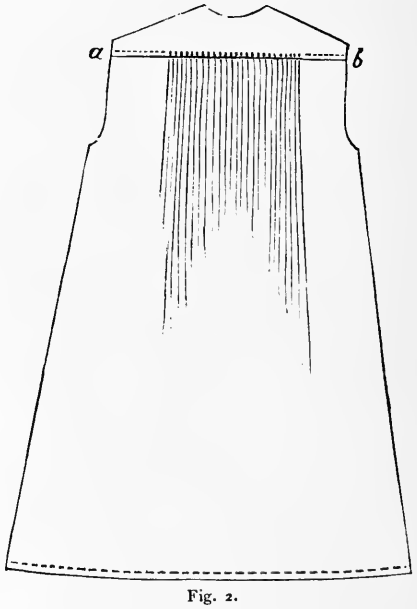


Fig. 2.

of the shirt to correspond, and hemmed down all around. The lower edge of the garment itself is then finished off with a very narrow hem.

We next take up the back breadth (Fig. 2). The upper edge, *a b*, is first to be gathered

straight across, leaving six or eight inches plain on each side. We then lay the gathers and fasten them, making the gathered space correspond with the width of the shirt-bosom. The lower edge of the breadth should then be hemmed to match the front.

We next prepare the yoke, which is to be put on above the gathers of the back. This yoke is cut by Fig. 3, which represents half of it, laid as it should be cut upon a straight piece of the material. For the yoke we require four pieces just alike. Two of these are to be sewed together over and over in the middle of the back, and make the outside, the other two are stitched together, and form the under side

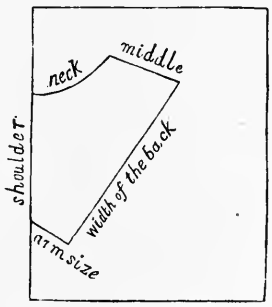


Fig. 3.

or lining. Along the lower edge of this yoke, between the outside and the lining, the gathers are fastened. The gathers should be sewed down on the outside, and where the breadth is plain, the yoke should be stitched on; on the under side it requires only to be hemmed across.

The two parts of the shirt are then put together by basting the shoulder of the yoke from the neck to the arm-hole, down upon the front from the point *a* to *b* (this is afterwards to be stitched), and by sewing over and over the sides *c c*, leaving for the sleeves an opening on each side from half way up the height of the shirt-bosom, and also, at the bottom of the side seams, an opening of about four inches in length.

When these two halves of the shirt have been thus put together, we cut the garment out in the neck from the point *h* (Fig. 1), the height in front, to *i*, the height of the shoulder. In the back we have the neck already cut out, and

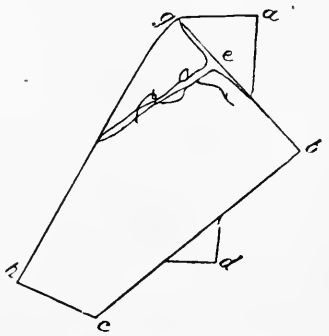


Fig. 4.

we ascertain if it be correct by applying the neck measure. The garment is then finished around the neck by a binding made to be about an inch wide when it is finished, upon which are sewed the buttons that will hold the collar in place.

The sleeves (Fig. 4) are cut in the following manner: take the five-eighths of material reserved for the purpose, lay it upon the lap-board or work-table, and fold it over from each side to meet in the middle, the material being placed in such a manner that the cut edges will be represented by *a b g*, *c d h*, in Fig. 4, and the selvages meet from the point *e* downward. We have thus the two sleeves each five-eighths in length and half the width of the material in breadth, lying before us, but not cut apart, and our first care is to unite them still more by basting together the two selvages and holding that seam in its place as represented in the figure, by pins at top and bottom. Thus prepared we fold it diagonally as shown in Fig. 4, and cut from *g* to *h*. We then sew each portion of the basted selvages; and the sleeves, each with its gore, are ready. Before sewing them up, however, we gather each at its lower edge, leaving about an inch plain at each end, near the opening *a* (Fig 5), which opening is to be left about two inches long, and is hemmed on each edge. We then lay the gathers of the sleeve, and apply the wristband or cuff. The plain wristband is cut double, and is about four inches deep when finished. Its length is decided by the wrist measure. It should be run together at the two extremities and turned over and stitched all around the edge, then basted on to the sleeves and the gathers sewed down upon it on the upper and under side.

Fig. 5.

The bottom of the sleeves being thus finished, we sew the sleeves up and prepare the top. Usually the sleeve should be about the same width as the arm-hole into which it is to be sewn. It may be larger, and can then be gathered a little upon the top, and this is preferred by some; but it should on no account be smaller.

The arm-hole of the shirt is cut out by taking the back and front together at the shoulder *k* (Fig. 1), and cutting straight down as far as *j*; then with a curve half an inch further to the side seam. In basting in the sleeves, place the seam upon the seam of the shirt, bringing the gore on the back. Then stitch the sleeves in with a wide seam, and fell it down upon the shirt all around the arm-hole.

We have now to make button-holes, three in the left-hand hem of the bosom, one in each wristband; or two if sleeve-buttons are worn, and to sew on the corresponding buttons. Also it is customary to sew a little pointed bit of double cloth, the tongue (9, Fig. 6), on the lower

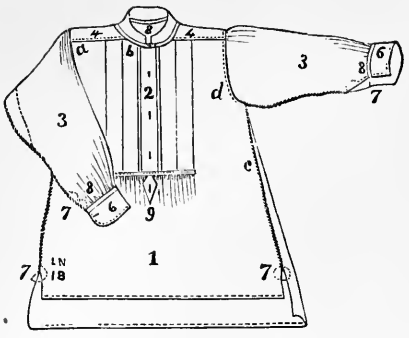


Fig. 6.

edge of the shirt-bosom, which has a button-hole, corresponding to a button on the waist-band of the drawers, and is designed to keep the shirt-bosom well in place. Further it is useful to put very small gussets in at the bottom of the side-seams and the sleeve seams, as is shown in Fig. 6.

We shall now explain the construction of the shirt-collar which, originally a part of the garment itself, has of late years assumed an independent existence. It would seem, judging from the ever new variety of names applied to that article, that the variety in collars must be endless; in fact, however, all may be reduced to three original types, the remaining variations being simply differences of height, or of the contour of the edge. These three styles are: the standing collar, the turn-down collar, and the collar divided in the back. All collars should be made threefold, as they retain their stiffness much longer. All three varieties require a binding which should be cut of the same length as the neck-band of the shirt and have a button hole in the middle to correspond to the button on the neck-band. For this binding two strips about an inch wide should be cut, and should be cut sloping towards the extremities; the collar also should be hollowed out a little in the middle, and as represented in Figs. 7, 8, somewhat more for a turned over than for a standing collar. The collar divided in the back is cut in four pieces and is put together so that one half overlaps the other.

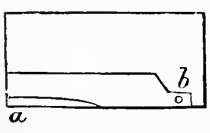


Fig. 7.

Fig. 8.

Cuffs of every size and shape are also made separate from the shirt. In this case the wristband should be about two inches wide, and the cuffs require an additional button hole by which to attach them to the button on the wristband.

In specifying the amount of material necessary for making a shirt, we assumed that it was to be made throughout of the same material; but it is far more common to make the cuffs, collar, and bosom of something finer than the rest of the shirt; as for instance when the shirt is cotton; these portions are usually made of linen, and we must abate from the quantity indicated the length necessary for the bosom, cuffs, and collar, and supply an equal length of the finer material. Having cut the lengths as directed, we remove from the front of the shirt the portion which would have been used for the folds, cutting it away by the dotted line in Fig. 1; we now take a length from the linen, corresponding to the length cut away, and we retain the whole breadth, to use if needed in the plaits. This breadth, divided in halves, gives the two sides of the shirt-bosom. The hems and plaits are then made as explained above, and the two halves are stitched into their places, beginning at the top at each side, after which the seam is felled down upon the body of the shirt, and this completes the work.

Besides the plaited shirt-bosom, there is also the plain front. This is made by turning back the linen, after ascertaining the proper width of the bosom, and facing or lining it, in its whole extent. The edges should receive a double row of stitching, and rows of stitching should also represent the hem which is to receive the button-holes.

To strengthen a shirt-bosom in the part most likely to wear, it is customary to put a false hem underneath the left hand hem, and to make the button-holes in this. It must of course be a little narrower, so as to be out of sight when the garment is worn. Or, if preferred, the hem of the front itself may be narrowed a little and receive the button-holes, and a strip of linen, stitched on outside, conceals it, and represents the hem. In either case, any repair of the button-holes is thus concealed, or the whole strip may be renewed with but little trouble.

SHOES. (*See* BOOTS and SHOES.)

SHOWER-BATH. (*See* BATH.)

SHRIMPS.—This lively little animal, of a shape somewhat resembling the lobster; is not much used for the table in this country, though when of good size they are sweet and well-flavored. Many are used in making dressings, sauces, etc. (*See* SAUCES.) The *Prawn* or *big Shrimp* is much larger than the common shrimp, and more delicate.

To shell shrimps or prawns, though a most simple process, would appear, from the manner in which it is performed by many people, to be a very difficult one; and indeed it is not unusual for some who, from lack of a little skill, find it slow and irksome, to have recourse to the dangerous plan of eating the fish entire. It need scarcely be remarked that very serious consequences may result from the shells being swallowed with them, particularly when they are eaten in large quantities. Unless the

shrimps are stale, when they are apt to break, they will quit their shells easily if the head be held firmly in the right hand and the tail in the other, and the fish be straightened out to the full length, then the two hands pressed quickly towards each other, and the shell of the tail broken by a slight vibratory motion of the right hand, when it will come off with the head adhering to it; a small portion only will then remain on the other end, which can be removed in an instant.

Boiled Shrimps.—Throw them into plenty of fast boiling water to which salt has been added in the proportion of from five to six ounces to a gallon; take off all the scum, and boil the shrimps five or six minutes, or less should they be very small. As soon as they are tender, drain them well in a cullender, and spread them out on a soft cloth to cool: or dish them on a napkin, and send them hot to table when they are liked so. Prawns are cooked in the same way, but must be boiled two minutes longer.

Potted Shrimps.—Boil two quarts of shrimps in their shells, shell them quickly, and just before they are put into the mortar, chop them a little with a very sharp knife; pound them perfectly smooth with two to four ounces of butter, a small saltspoonful of mace, and one third of a saltspoonful of cayenne. Set the mixture in a cool place for three or four hours to harden before it is put into the potting-pans. If it is to be kept some time, pour lukewarm melted butter over the top. This is a delicious preparation.

Stewed Shrimps.—Wash two quarts of shrimps well, and put them into a saucepan with four sliced onions, two sprigs of parsley, one of thyme, two cloves, salt and pepper; add two ounces of butter, and half a pint of white wine, pour in just enough water to cover all, and set on a brisk fire; stew till quite tender, drain, and serve warm. Garnish with green parsley.

SICKNESS. (*See* CHILDREN, CONVALESCENCE, DIET, FEVER, NURSING, SICK-ROOM and each disease by name.)

SICK-ROOM. The rooms in which the sick are nursed should be as capacious as possible, because then the patient has more air to breathe, and it does not require renewal so often as the air in a small room does, and thus frequent exposure to draughts is avoided. A fair amount of ventilation is carried on by the door, windows, and fire-place (there should always be a fire-place if possible), but at least twice a day the windows should be opened so as to thoroughly change the air of the room. If the patient can leave the room for a short time, so as to allow of a free current of air, so much the better; if not, the patient should be lightly covered over during the airing so as not to feel any draught, In cases of fevers and any contagious disorders, it is best to remove from the room all unnecessary articles, as curtains, hangings, carpets, etc., and let there be disinfectants about. (*See* DISINFECTANTS.) In chronic cases, in all cases in fact where a contrary course is not ordered by the physician, the sick-room should be made as cheerful as possible, and the amount of light should be regulated so as to please the patient; in cold weather the fire should be kept nice and bright; and, when possible, flowers and plants should be placed in the room. A thermometer should be in the room so as to have the temperature properly regulated.

The furniture of a sick-room should consist only of such articles as are really necessary. Bear in mind that wool holds smell and disease-germs much longer than cotton or linen, therefore do not have woollen curtains. It is better, in fact, to have no curtains at all, but if the room seems bare and cheerless without them use light muslin, or something that may be washed easily. Have no woollen-covered sofa or chairs; cane-bottomed or plain wood are preferable, and the floor is infinitely better without any carpet, except perhaps a narrow strip to walk upon just to prevent noise. In cases of accident or chronic diseases, the bed may be placed where the patient feels most comfortable, only in the former case it should be where there is a good light to see and dress the wound; but in fever and small-pox let it be between the door and the fire-place. The reason for this is that there is a slight draught from the door toward the fire-place, which will insure pure air on the side of the bed next the door while the air contaminated by passing over the patient will be carried up the chimney.

The bed should not be too high, or it will prove a source of discomfort to both patient and nurse. For the convenience of both, the height of the bed should be such as to admit of the patient's head, when he is sitting up, being on a level with the nurse's shoulder as she stands beside him. It is also a disadvantage to have the bed too wide; and if the bed be very wide, a good plan is to make a division down the middle with a board a few inches high covered with the under bed-clothes. This not only prevents the invalid from slipping away when he is lifted, but answers the purpose in some degree of two beds. As to the bed itself, the best is the hair, or prepared spring mattress, and the worst is one made of feathers. A good and cheap mattress can be made from cornhusks; even clean straw or chaff is better than feathers. Wadded quilts or comforters are very objectionable, on account of the difficulty of cleansing them properly; and especially when they are wadded with cotton.

The bed-clothes should be changed as frequently as possible. To change the bed-clothes when the patient is unable to sit up, place him on one side of the bed, then roll up the sheet lengthwise to the centre; and having previously prepared the clean sheet by rolling it in the same way to the middle, (lengthwise, of course,) spread the part left unrolled over the half of the bed, bringing the roll of the clean sheet close to the roll of the soiled one; now lift the patient over on to the clean sheet, pull out the

soiled one, and unroll the clean one, and the thing is done. When it is desirable to keep the head cool, a pillow made of hair, prepared sponge, or oat chaff, is very much to be pre-preferred to a feather one.

Foul gas is generated by burning a kerosene lamp all night. This can be remedied by the following simple arrangement: Take a raisin, or any other box that will contain the lamp when set up on end. Place the lamp in the box, outside the window, with the open side facing the room. When there are blinds, the box can be attached to each by leaving them a little open and fastening with a cord: or the lamp-box can be nailed to the window-casing in a permanent manner. The lamp burns quite as well outside, and a decided improvement in the air of the room will be the result. (*See* HOT-WATER BAG, ICE-BAG, NURSING AND SPONGE POULTICE.)

SILK.—The manufacture of silk which was first practised by the Chinese has now spread over a great part of the world, though France and Italy are the only European countries in which the silk-worm, which furnishes the raw material, seems to thrive. In California the culture of the silk-worm has succeeded admirably, and promises to become one of the leading industries; and as good plain silks, especially black, are now manufactured in the United States as in either France or England. For the richest silks, however, especially in fancy colors and patterns the looms of Lyons are unequalled. The English black silks of the higher grades are equal to the French in appearance and are considered more durable.

Figured silks do not generally wear well if the figure be large and satin-like. Black and plain-colored silks can be tested by procuring samples and making creases in them; fold the creases in a bunch and rub them against the rough surface of the carpet or a rep-covered chair. Those which are poor soon wear off at the creases. Silk intended for dress should not be kept long in the house before it is made up, as lying in the folds will have a tendency to impair its durability by causing it to cut or split, especially if the silk has been thickened with gum. Hard silk should never be wrinkled, as the thread is liable to break in the crease and it can never be rectified. (*See* FLOSS.)

Keeping Silk,—Silk articles should not be kept in white paper, as the chloride of lime used in bleaching the paper will probably impair the color of the silk. Brown or blue paper is better, and the yellowish smooth Indian paper is best of all.

Renovating Old Silks.—In making over black silk dresses, etc., the following is an excellent mode of cleansing:—Rub each breadth carefully with a woollen cloth to get the dust from the surface, then sponge it all off with water in which one or two black kid gloves have been boiled, a quart of water for a pair of gloves; iron while wet, with extremely hot irons, on the wrong side. For colored silks, the same colored gloves to be boiled; for this purpose it is well to save old kid gloves of all colors. Another mode is the same process of rubbing off the dirt with a woolen rag; then mix an equal quantity of strong tea and vinegar, with which the silk is washed by rubbing it with a piece of flannel. It must be made very wet. Smooth the silk carefully, folding it, and in about fifteen minutes iron it on the wrong side with very hot irons. This applies only to black silks, black ribbons, cravats, etc., but might be injurious to colors.

To Clean Silk.—Grate raw potatoes, washed and peeled, to a fine pulp; add water in the proportion of a pint to a pound of potatoes; pass the liquid through a coarse sieve into a vessel, where it is to remain till the fine white starch subsides to the bottom. Pour off the clear mucilaginous liquor, which is to be used for cleaning. To perform this process, spread the article to be cleaned upon a table, which should be covered with a linen cloth; dip a sponge in the potato liquor, and apply it till the dirt is removed; then wash the silk in clean water several times. Some use the whole of the pulp and water for the scouring; and others slice the potatoes, and rub them on the stuff as if it were soap.

Grease-spots may be removed as follows:—To two ounces of spirits of wine add one ounce of French chalk and five ounces of pipe-clay, both finely powdered; make up the mixture into a paste, roll it into pipes, and let it dry. Apply it by rubbing it on the spot of grease, slightly moistened, and then brushing it off, till the grease is all absorbed.

Wrinkles, to Remove.—An excellent way to take the wrinkles out of silk scarves and handkerchiefs is to moisten the surface evenly with a spoon and some wheat glue, and then pin the silk, with some toilet pins, around the shelves or on a mattress or feather bed, taking pains to draw out the silk as smooth as possible. When dry, the wrinkles will have disappeared. Some silk articles may be moistened with weak glue or gum water, and the wrinkles ironed out with a hot flat-iron on the wrong side.

SILLABUB. (*See* SYLLABUB.)

SILVER-WARE.—The beauty of silver and its great durability cause it to be used for many articles of household furniture. The great progress which has been made in recent years in the art of silver-plating, it is true, has done away to a considerable extent with the solid table services which were once the pride of the household; but spoons, forks, ladles, etc., are still in the great majority of cases made of the solid metal. The absence of any general law for assaying the precious metals in this country is felt and regretted both by respectable vendors and purchasers of plate. The stamps usually found upon articles of silver or gold are nothing more than the initials or trade-mark of the manufacturer, and his integrity is the only guarantee of the purity of the metal. Nor do the stamps upon silver-plate give any indication of the relative quality of the metal;

all degrees of alloyed metal being stamped alike. The only safety of the purchaser lies in selecting a manufacturer whose reputation is a guarantee against wilful deception.

To clean Silver-ware.—When the plate is only slightly soiled, a good plan is to put it into a large saucepan of cold water, with a lump of whiting and some shavings of yellow soap to make a good lather; then boil it half an hour, rinse it in cold water, rub it with a soft cloth, and afterwards with a piece of chamois-skin. This prevents the rubbing off of the dead frost-work from the chasing, in removing tarnished spots. No plate-powder or rubbing will remove scratches, caused by the careless mixture of spoons and forks with the knives after using them. It is therefore of the greatest importance to keep the silver in a tray by itself, and to wash it in soap and water immediately after it has been used, finishing with clean water, and rubbing it dry with a wash-leather. When treated in this way, plate requires very little powder of any kind to renew its polish, and it is only for ill-used and scratched silver that the various and much-vaunted plate-powders are required. All those which are composed of chalk in any shape, or ammonia, are innocent, whilst the presence of mercury, as indicated by the slight tinge of a slate-blue color in the powder, is exceedingly prejudicial. Servants are very fond of these mercurial preparations, because they act quickly, and give a good polish after cleaning; but this soon tarnishes, because a certain portion of the amalgam made with the silver and mercury is left on the surface of the former, and the consequence is that it tarnishes by oxidation on exposure to the air. Gas and sulphurous coals are very apt to blacken silver, the former from not being completely purified from sulphureted hydrogen, and the latter from causing its presence in large volume. To remove this deep stain, or that caused by long exposure to the air, requires something more than mere chalk, and the jewellers use an oxide of iron called *rouge*, which is an innocent preparation, being prepared by the precipitation of sulphate of iron by carbonate of potash, and then exposing the dried powder to a high heat. The leathers which are employed are the wash-leathers of the shops, and they should be washed occasionally when they become greasy and blackened with the oxide. A piece of soft chamois-skin is as good as anything else, but it is spoiled by wetting, and should only be used in polishing.

Plate-Powder.—Take one pound of the best whiting, or of prepared chalk, and rub it to a fine powder. Then sift it. Mix together four ounces of spirits of turpentine, two ounces of spirits of wine, one ounce of spirits of camphor, and half an ounce of spirits of hartshorn. Then add the whiting gradually to the liquid, stirring in a little at a time, and mixing the whole thoroughly till it is of the consistence of cream; put it into a very close vessel (a large bottle or a white jar), and cork it tightly, tying down a leather over the cork. To use the mixture, stir it up, pour out a sufficient portion into a bowl, and with a soft clean sponge cover the silver with it so as to give it a coat like whitewash. Set the silver aside for ten minutes, till the paste has dried. Brush it off, and polish first with a buckskin, then with a silk handkerchief. It will be found very convenient to keep this mixture always in the house.

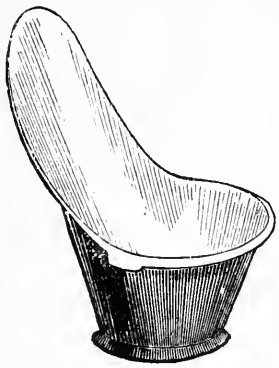
Water in which Irish potatoes have been boiled has a remarkable cleansing influence on silverware of all kinds, especially spoons that have become blackened by eggs. Delicately chased and engraved articles can be made bright by this method even better than by the use of polishing-powder, which is apt to settle in the depressions, requiring particular care in its removal. The water should be strained (unless the potatoes were washed before being put into it) and the articles washed in it.

SILVER-PLATING. (*See* PLATE.)

SINKS.—Every kitchen should have a sink. It should be placed in a good light. The water pipe should pass below into a drain, in which there should be a stench-trap to prevent any bad smells rising. Porous stone is a bad material for sinks; the best is either wood lined with lead, glazed stone-ware, or stone. When of iron, the inside should be painted and a fresh coat given now and then. The drain should deliver at a distance from the house, and should be ventilated by having suitable means for the admission of air at its mouth, and a pipe at least four inches in diameter rising from the end nearest the house to a point that will secure a good draught, and that is not under a window. (*See* DRAINAGE and HOUSE.)

SIRUP. (*See* SYRUP.)

SITZ-BATH.—This is a form of the bath much used in the hydropathic practice and recognized as beneficial in certain cases by the regular physicians. The tub for the sitz-bath should be just large enough to sit in with comfort; the patient sits in this, with the feet resting on the floor, from eight to forty minutes, according to the severity of his disease, and

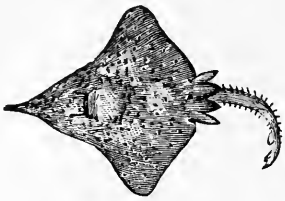


Sitz-Bath.

sometimes as often as three times a day. The sitz-bath is unquestionably a powerful remedy in certain disorders of the head and abdomen. It draws the bad humors from the head,

strengthens the digestive organs, and braces the entire system. Only a small quantity of water is used generally, and thus soon becomes warm. It is not advisable to take the bath except under medical advice.

SKATE.—The *smooth skate* is a variety of the Ray, and is even less often in market. It is a large fish with a smooth back, a stout tail,



three rows of short stiff fins, one over each side and the other on top of the tail. For Cooking, *see* RAY.

SKELETON, The Human.—The skeleton of a full grown human being consists of 200 distinct bones, exclusive of the little bones in the internal ear. They are thus distributed:—

The spine	26 bones.
Skull	8 "
Face	14 "
Ribs and breast-bone	26 "
Upper extremity	64 "
Lower extremity	62 "

These bones are divided into four classes, known as *Long*, *Short*, *Flat* and *Irregular*.

The *long bones* are those which exist in the limbs, and are employed in locomotion; their characteristics are, that they consist of a *shaft* and two *articular extremities*, these extremities being covered with what is termed articular cartilage, and being capable of mutual movement upon each other by one or another form of joint, the gliding movements of such joints being assisted by the presence of bags containing joint oil (*Synovia*), which is placed between these articular cartilages. The shaft of a long bone is cylindrical, or nearly so, and its extremities are expanded. The shaft consists of compact tissue, whilst the extremities are composed of spongy, having a thin layer of compact tissue coated over them. The long bones are the cubit, the two bones of the fore-arm, the thigh bone, the shin and splint bones, the bones of the fingers and toes, and the collar-bone.

Short Bones. These are compact, strong bones, having several articular surfaces for mutual adaptation, and are found in those parts of the body where strength and limited motion are required, such as in the wrist, bones of ankle, and instep. They consist of spongy tissue, with a coating of compact structure.

Flat Bones. These bones afford broad, flat surfaces for the attachment of muscles, and for the protection of cavities; they consist of two layers of compact tissue, containing a layer of spongy between them. They are the skull bones, blade bones, haunch bones, breast bones and ribs.

Irregular Bones are those which, as their names would suggest, cannot be grouped with the previously named, such as the bones of the spine, jaw bones, and several of those bones which make up the skull.

The natural position of the human skeleton is erect, and this is in great measure due to combined muscular action. The natural architecture of the skeleton adjusts its own centre of gravity. All those joints which transmit weight to the ground, lie in one vertical plane, and such a line would be described as passing from the top of the head, through the joints, between the head and first bone of the spine, through that between the last bone of the vertebræ and the sacrum, and through those between the sacrum and haunch bone, the hip, knee, and ankle. The spine, consisting of a great number of bones, peculiarly articulated together by interposed elastic cushions, increases in size from above downwards, and, moreover, possesses several well-marked curves. The object of these cushions and curves is to receive the shock of sudden blows and falls, and to disperse their effects; again the curves are arranged alternately, so as to distribute the weight with greatest advantage to the centre of gravity of the body, which passes through all the curves, and falls on the centre of the base of the column. It will be observed that all the bones of the limbs are slightly curved, thus assisting in the individual and mutual transmission of shock. The pelvis (sacrum and haunch bones) is very broad and strong in man, and the plane of its arch is in such a direction that the weight is transmitted vertically from the sacrum to the heads of the thigh bones. The thigh bone being curved inwards, allows of the weight of the body being brought under the pelvis, and transmitted to the broad expanded ends of the bones forming the knee joint. The foot, in its turn, consists of an arch, or rather double arch, which receives the transmitted weight, at its crown, directly through the leg bones. Thus it will be seen that the upper limbs take no part in the maintenance of this natural upright condition.

SKEWERS.—Small pins of wood or iron for fastening meat to a spit, or for keeping it in shape while roasting. Those designed for use in this way are perfectly plain; but some are made in very ornamental shapes, and are used to decorate different joints when sent to table. These should be removed just before carving.

SKIRTS.—A dress is composed of a waist and skirt, but in respect to the latter, fashions vary so much that it is impossible to give any fixed rule for the quantity of material needful or the number of breadths required. The accompanying figure represents the manner in which a breadth is gored, and it is now (1875) customary to use one straight breadth in the back, two gores on each side (the straight side

of the gore nearest the front of the skirt in all cases,) and a front breadth sloped on the sides. With 24 or 27 inch material, this makes the

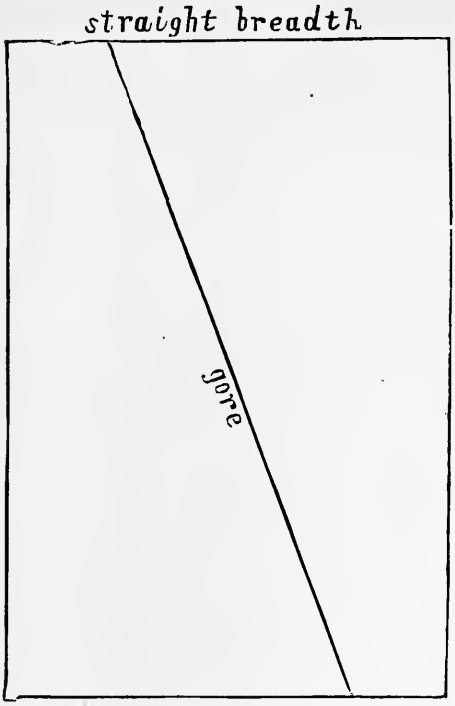


Fig. 1.

breadth of the skirt about four yards, which is a fair average width.

The breadths being cut out and laid together require to be all rounded a little, at the bottom and at the top, the front and first gores on either side, to make the skirt hang evenly. A facing of suitable depth, 12 inches or thereabouts, should be cut by each breadth and tacked to it before the breadths are run up, leaving one edge of the facing free on each side, to be hemmed down afterwards in order to cover the raw edges. This facing is cut the other way of the material, as it hangs better and is less likely to sag.

The skirt thus prepared should be bordered by a worsted braid (or if the dress is silk, a silk braid is sometimes used,) which has been thoroughly wet and dried to secure it from shrinking after it is put on. This braid may be bound on, or faced on, leaving one edge to come in sight below the edge of the dress.

A band should be prepared of strong material, or a broad linen tape, for the waist. The skirt is marked in the middle of the front and at the back, and the band marked to correspond. The skirt is then arranged for sewing on, but it is useless to give minute rules for this, since fashion constantly varies in respect to the distribution of fulness.

In the trimming of the skirt the greatest variety prevails; crosswise bands or folds, gathered and plaited ruffles, and flounces are the principal styles, and in many cases these are all combined upon one skirt.

For gathered ruffles a quarter of a yard extra is allowed to every yard, for the fulness. In plaitings which touch each other's edges, whether box-plaiting, kilt, or knife-plaiting, three times the length around the skirt must be allowed. In all plaitings, however, this amount may be scanted by leaving more or less plain space between the plaits.

Flounces and ruffles are frequently, and folds are always, cut on the bias, and much care should be taken to cut *exactly* on the bias; this is found by folding the material over crosswise until the woof, the thread that crosses the material, lies exactly upon the selvage.

SLAP-JACKS.—This is the name commonly given to what are properly speaking *flapjacks*. To make, scald a quart of Indian meal with enough boiling water to make a thin batter; when lukewarm, stir it well, and add half a pint of water, half a teacupful of yeast, and a little salt; set it away to rise, and when light fry them in just fat enough to prevent their sticking to the frying-pan.

Another method of making them, which is very nice, is to turn boiling milk or water on the Indian meal, in the proportion of a quart of the former to a pint of the latter; stir in three tablespoonfuls of flour, three eggs well beaten, and a couple of teaspoonfuls of salt. Make into a light batter and fry as above.

SLAW. (Cold.)—Cut a head of fine white cabbage into shreds; dissolve, in a teacupful of vinegar, two teaspoonfuls of sugar and a teaspoonful of salt; add a little pepper, and pour the mixture over the cabbage. More vinegar may be added if this does not make the slaw sour enough.

Hot Slaw.—Cut the cabbage into fine shreds, and boil it in clear water until it is perfectly tender, allowing so little water that when the cabbage is cooked sufficiently there will be scarcely any left in the stewpan. Just before dishing, add a teacupful of sharp vinegar, half a tablespoonful of butter, a little salt, and a dust of pepper; turn into a deep dish and cover close.

Or, shred the cabbage and put it into a deep dish. To a teacupful of vinegar, add a tablespoonful of sugar, a tablespoonful of butter, half a teaspoonful of salt, and a dust of pepper; put them over the fire, let them boil a few minutes, and turn the mixture scalding hot over the cabbage; set it aside and let it become perfectly cold before serving.

SLEEP.—Sleep is as necessary to existence as food, and yet sleep is in fact a partial suspension of some of the functions of life itself, all of which are performed with intermissions. It is the essential condition of the repose and repair of those nervous centres upon which incessant demands are made during every moment of our waking life; and without it these nervous centres would soon cease to perform

their functions and either death or insanity would result. The immediate cause of sleep—that is, the mechanism in the body by which it is produced—was until recently quite misunderstood. It was formerly supposed that pressure on the brain afforded the explanation. Most writers on the subject have adopted this view, and some of the facts by which it is supported are very striking. Apoplexy is caused either by unnatural fulness of the vessels of the brain, or by the rupture of a vessel which allows the escape of blood, and in either case pressure on the organ is established. This affliction is attended by drowsiness or complete unconsciousness, according to the degree of pressure thus exerted. From this fact it was inferred that sleep is caused by accumulation of blood in the head; and in support of this view certain other facts have been advanced, such as that full-blooded people are usually the best sleepers, and that the recumbent posture, which promotes the flow of blood to the brain, induces sleep. Many instances have occurred in which a portion of the brain has been laid bare by accident, or as a curative measure; and in all cases of this sort it was found that consciousness can be instantly suppressed by pressure upon the brain. This also was supposed to give strong confirmation to the pressure theory of sleep. But there is a wide difference between stupor and sleep; the one is a result of diseased action, and it is difficult or impossible to rouse the person from it, while the other is a natural state from which he is easily aroused.

It has now been determined that so far from containing more blood than usual, the brain during sleep contains much less blood. We are told on very high authority that "the blood is the life" of the body, and the tendency of modern physiology is to regard the blood as the origin of all force, and of all the functions of the system. Now when the circulation in the brain is diminished, it becomes deprived of the proper stimulus by which its state of activity is maintained; its vitality, in fact, becomes lowered, and it sinks into a state of quiescence. It then obtains rest, which during our waking hours it never has for a single instant; and it is doubtless during sleep that the waste which the brain has previously undergone is repaired, and the injuries inflicted upon it by over-exertion made good. For it must be borne in mind that every act of life, whether it be the wielding of an axe, or the action of the brain in conceiving a thought—or of the tongue in expressing it, is accompanied by waste.

In perfect sleep there is no consciousness; it is a temporary death as far as concerns all action and motion which lie under the power of the will. Dreams generally occur when sleep is unsound, and are, in fact, an indication that it is unsound. The affection called nightmare is in certain respects different from ordinary dreaming. While the imagination and the memory are in full activity, the power of the will is either absent or greatly impaired. In addition to this the function of respiration is much impeded; and out of this, in some shape or other, a horrible association of ideas usually springs. Nightmare, in fact, furnishes some of the most distressing sensations that can be experienced; all the store of horrors which the mind has accumulated or conceived seem to come up at its call, and from these whatever is most disgusting or appalling is selected and moulded into torturing shapes. Indigestion is unquestionably the chief cause of nightmare, as well as of dreaming. Any one whose digestion is not strong may almost infallibly bring it on by taking, without appetite, a late heavy supper. The disorder also plagues people who are asthmatic. The cure of nightmare, unconnected with organic disease, consists in avoiding late suppers, attention to diet in general, plenty of fresh air, and healthful exercise.

The approach of sleep is generally heralded by a feeling of langour and heaviness, during which we see some of the unobserved functions of the nervous system make themselves apparent. Thus, first of all, the eyelids droop—we are not aware of any strain in keeping them open, yet the moment our attention, involuntary though it be, is taken off, they gradually sink. So, too, the head, ordinarily held erect, falls forward, and the limbs fall unconsciously into the easiest posture. Even if the individual lies down, it will be noticed that as sleep comes on a different posture is assumed, one which allows of relaxation of all his limbs and all his muscles. The respiration, too, is slower, gentler, and more prolonged,—it is carried out with the least amount of work, and the same may be said of the heart. Waking, probably, depends on the return of blood to the brain in obedience to the stimulus given by one or more of the senses, as light, noise, or touch. Habit, too, has a strong effect.

The proper duration of sleep cannot be absolutely fixed. Some men require much more than others; and age, the amount of work performed during the day, whether physical or mental, and other circumstances, regulate the demands of the system. Infants sleep the greater part of the time—children require more than adults, and as a rule, the middle-aged more than the old. In the dotage of old age, however, as if to complete the parallel between the first and second childhood, sleep again claims a great part of the time. "Perhaps," says Dr. Hinton, from whose excellent work on physiology the substance of the present article was taken, "no better division of time can be made than that of Alfred the Great. He assigned eight out of the twenty-four hours to work, eight to amusement, and eight to sleep. The demands of modern life in most instances sadly disturb such a relation between work and play; but the period he assigned for sleep seems to accord with the general experience. Less than eight hours' sleep is sufficient for most men and women when in health, and more is unnecessary or even injurious. In this matter, however, there are exceptions. Jeremy Taylor trained himself to exist on three hours' sleep

out of the twenty-four. Frederick the Great and John Hunter slept only four or five hours in the same time. Wesley lays down the proper duration of sleep at six hours, and Lord Coke at seven."

The hour of going to bed must of course depend on the habits of the individual. Persons who get up early should go to bed early, and *vice versa*. Much has been written in praise of early rising, and with some truth; there is an undoubted relation between sleep and night, when, with few exceptions, all animated nature reposes. It is also a good, though not an indispensable, rule of health to retire to rest early; the real point being to obtain, sooner or later, the requisite eight hours' sleep.

For refreshing sleep, it is essential that the bedroom be well ventilated, and those who accustom themselves to sleeping with the windows open find the practice of great value. The bed should be in the middle of the room, not in a corner, and no curtain of any kind should surround it. No greater domestic improvement has been effected than the substitution of hair mattresses for feather-beds. Perspiration is more active during sleep than when we are awake, and it is unduly encouraged by the sinking of the body in a soft bed, which also enervates the entire system. The open state of the pores of the skin makes sleeping in the open air hazardous; but the belief that moonbeams exercise a peculiarly noxious influence on a sleeper who is exposed to them is unfounded. Most people sleep best on the right side; the chief reason of this is that the heart lies toward the left side, and when a person lies on the right side, greater freedom is given to its motions. It is somewhat strange that such opposite conditions as great heat and great cold should equally be the cause of sleep, while a moderate degree of cold keeps a person awake. As for the last, it seems to act simply as an uneasy sensation would do in preventing sleep. Extreme cold causes the blood to accumulate in the internal organs, including the brain, because it is driven from the surface by contraction of the superficial blood-vessels; the result of this is not sleep, but stupor. The effect of great heat, on the contrary, is to increase the amount of blood circulating in the superficial parts and in the extremities of the body; which causes a lessened flow of blood through the brain, followed by sleep.

SLEEPLESSNESS.—The effects of protracted wakefulness (*Insomnia*) sooner or later show themselves on the strongest constitution. The person becomes gloomy, irritable, and peevish; the memory is defective and the thoughts confused. Perhaps the most terrible punishment which Chinese ingenuity has devised is prolonged loss of sleep. In some instances it precedes, and even seems to be the cause of insanity; and under all circumstances it is one of the most troublesome affections with which one can be called upon to deal. In the preceding article we have treated at length of the causes and conditions of sleep, and it will be necessary to read that carefully in order to understand what we now have to say about sleeplessness.

The simplest form of wakefulness is that which is produced by a violation of one or more of the conditions appropriate to sleep. Thus, a bright light in the room, an unusual noise, or an uncomfortable bed, suffice to keep most persons awake. An excess of the very causes which induce sleep also commonly prevents it. Over-fatigue is usually followed by wakefulness; and, such is the effect of habit, some persons are unable to sleep if they remain out of bed beyond their usual time of retiring to rest; or, on the other hand, if they go to bed unusually early. When the brain has been once stimulated to activity, it requires some time before the circulation of blood through it regains the balance which is maintained in the waking state; when this balance is regained, most persons easily fall asleep if other circumstances are favorable. Many people, indeed, possess the faculty of sleeping at will by merely closing the eyes and otherwise shutting out external impressions. A great many persons, on the other hand, and particularly those of a nervous temperament, sleep with difficulty, and some may be said to obtain it only by stratagem. Any intellectual effort immediately before going to bed is sure to be followed in such cases by a restless night. Nothing banishes sleep more effectually than pain; patients suffering from neuralgia have been almost sleepless for months. Coldness of the feet is a very common cause of wakefulness. A sensation of dry burning in the soles of the feet and palms of the hands, to which some people are liable, and which also accompanies certain diseases, is another cause; sponging the parts with vinegar and water relieves this affection. Of all the numerous causes of wakefulness however, indigestion is the most common. Anything which acts as an irritant to the stomach is apt to irritate the brain by means of the close union which exists between these organs through the medium of the nerves. On the other hand, that kind of exhaustion which results from want of food frequently prevents sleep; if, for instance, a person accustomed to dine late happens to dine early, and goes to bed without any substantial refreshment, he is very liable to find himself utterly sleepless. This kind of sleeplessness is apt to be very persistent, because the exhaustion increases in proportion to the time during which the person remains awake. In such a condition a sandwich and a glass of wine or ale act better and more speedily than an opiate; no sooner has food been taken than a glow of comfort and a tendency to repose succeed, and the person soon falls into refreshing sleep. Another cause of sleeplessness, little recognized, is taking stimulating drinks; those who indulge freely at night are apt to awaken very early in the morning and remain long sleepless. Tea and coffee also have a tendency to produce wakefulness; and opium, belladonna, and Indian hemp, or *hashish*, in small doses, have the

same effect. There are good reasons for believing that all these articles act alike, in at least one respect, namely, by increasing the circulation of blood in the brain.

In order to promote sleep when it is wanting, it is of course necessary in the first place to remove every exciting cause of wakefulness. It is usually essential to give up the use of tea and coffee, and, as has been said, it is sometimes necessary to leave off taking stimulants. The person should be careful not to go to bed either with cold feet, or with a stomach that has been either long empty or recently filled. Many devices for inducing somnolence have been practiced with more or less success; one of these is combing the hair, which has a very soothing effect on some persons. Another is to have the feet gently shampooed. Walking about the bedroom in one's nightdress, so as to get what Dr. Franklin called an air bath, is a good plan; and the cold water bath, just before retiring to rest, by virtue of its stimulating action, is often successful. In more refractory cases the warm bath may be tried—it acts by withdrawing the blood from the brain. On the same principle, the upright position, by favoring the return of blood from the head, is sometimes useful. Sufficient outdoor exercise should in every case be taken, and those who are strong enough should carry it to the point of fatigue. One of the most effectual modes of dealing with that common form of wakefulness which results from overaction of the brain is to force upon the attention some monotonous train of thought, and to tire the brain by its constant repetition. Reading a dull book sometimes answers; or repeating short verses over and over again, or counting backwards. Monotonous sounds act in the same way. Boerhaave ordered for a sleepless patient that water should be so arranged as to drop constantly on a metal pan. The whole chance of success lies in compelling the mind by a strong effort of the will to give up the train of ideas by which it has been occupied, and to take up the less interesting and more simple ideas presented to it.

Some years ago a curious plan of procuring sleep by this means was announced as a great discovery by a Mr Gardner; and testimonials as to its efficacy were given by the late Prince Albert, Sir Fowell Buxton, Sheridan Knowles, and other men of eminence. This plan, the secret of which was bought by Mr. Binus, and published in his "Anatomy of Sleep," was as follows: The person who, after going to bed, finds himself wakeful, is to lie on his right side, with his head comfortably placed on the pillow, having the neck straight, so that respiration may be unimpeded. Let him then close his lips slightly, and take a rather full inspiration, breathing through the nostrils, unless breathing through the mouth is habitual. Having taken the full inspiration, the lungs are to be left to their own action, that is, expiration is not to be interfered with. Attention must now be fixed upon the respiration. The person must imagine that he *sees* the breath passing from his nostrils in a continuous stream, and at the instant that he brings his mind to conceive this apart from all other ideas, consciousness leaves him, and he falls asleep. Sometimes it happens that the method does not at once succeed. It should then be persevered in. Let the person take thirty or forty full inspirations, and proceed as before; but he must by no means attempt to count the respiratory acts, for if he does the mere counting will keep him awake. The plan is at all events safe, and can easily be tested.

In many cases of prolonged sleeplessness, opium and other narcotics are of great use, not only by procuring forced repose, but by breaking through the habit of not sleeping into which the system has fallen. But no one should venture upon the use of such remedies except under medical advice.

SMALL-POX.—This is a febrile, eruptive, and contagious disorder, which in past times caused a frightful mortality, but in recent times has been brought largely under control by the discovery of vaccination. The most common varieties are:—the *discrete*, in which the pustules are distinct; the *confluent*, in which the pustules run together; the *malignant*, which is often associated with purpura and an eruption resembling measles—a very dangerous form; the *modified*, which comes on in those partially protected by vaccination, and is a kind that runs a very mild course. In cases of small-pox there is:—1. The stage of incubation, which lasts twelve days from the date of receiving the poison. 2. The stage of eruptive fever and invasion, lasting forty-eight hours. 3. The stage of maturation, wherein the rash is fully developed, lasting about nine days. 4. The stage of secondary fever or decline, lasting a variable time, according to the severity of the disease. Discrete small-pox is the simplest form of the disease, and is rarely attended with danger to human life; confluent small-pox destroys the greatest number of lives, and may prove fatal to as many as 50 per cent. In the distinct or discrete form, the primary fever is less intense than, in the confluent form; in the latter, there is often delirium, and more especially in those who are intemperate in their habits.

The malignant variety is terribly fatal; the blood seems profoundly poisoned from the first, and is more fluid than usual; bleeding from the mouth, nose and bowels is not uncommon: in women, there is also bleeding from the womb, and if they are pregnant abortion may ensue. In modified small-pox, the patient is often able to go about the whole time, and the rash may suddenly decline in the fourth or fifth day, and recovery follow.

The *symptoms*, when small-pox first comes on, are fever, pains in the limbs and back, headache, vomiting, and pain on pressing the pit of the stomach. On the third day, small red spots appear on the face and head; these gradually rise and enlarge, the eruption spreads

over the whole body, into the ears, eyes, nose, mouth, and throat. The hands, feet, and face swell, there is great difficulty in swallowing; by the eighth day the face is a mass of pocks. In severe cases the eyes are often seriously affected and the sight sometimes lost. On the eleventh day the sores discharge and form a dry crust, which gradually dries and falls off. This is the time when it so frequently proves fatal. In seventeen to twenty days the disease may be said to have run its course. Small-pox may be mistaken for measles, but in the latter disease there is running at the eyes and nose, and sneezing, and the rash comes out about the fourth day; it may also be mistaken for chicken-pox, but in this disease there is little or no fever, the rash comes out in twenty-four hours, is vesicular and not shotty, and more abundant on the body and not so much on the face and forehead.

Treatment.—There is no medicine which can check this disorder; when once taken it must go through its regular stages, and nothing will either cut short or cure it. The patient should be at once isolated. The diet should be light, consisting of milk, tea, gruel, beef-tea, chicken-broth, and the like. The hair should be cut close, as it is impossible to brush it after the pocks have risen. Great pains should be taken to ventilate the room well without having too much draught, and it should be kept at a temperature of about 60°. Scrupulous cleanliness must be observed, and all linen, clothes, etc., must be disinfected after being used. (*See* DISINFECTANTS.) Bed-curtains, carpets, and hangings of any kind must be dispensed with. Flour, starch, or hair-powder may be sprinkled abundantly over the face and body to relieve the itching and discomfort, and to absorb any acrid discharge. Olive oil, cold cream, and glycerine and water, will also relieve the patient when locally applied. To prevent pitting, keep the light from the patient's face, either by covering it with a piece of something black—say silk—with holes cut in it for the mouth and nostrils; or by keeping the room dark. Covering the face is better than darkening the room—it is more convenient for the attendants, and has a better effect upon the skin. The part of the body covered by the clothes is scarcely marked in comparison with the parts exposed—as the face and hands. Small-pox is dreadfully infectious; no one, therefore, must be allowed to come in contact with anything which the patient has touched until it has been carefully disinfected. After recovery, disinfect the sick-room according to the directions given under scarlet-fever. (*See* VACCINATION.)

SMELLING-SALTS.—This popular remedy for faintness, etc., is prepared as follows: Liquid ammonia, one gill; otto of rosemary and English lavender, a quarter of a dram each; bergamot and cloves, eight drops each; mix and shake together in a stoppered bottle. This mixture is used by filling the smelling bottles with asbestos, or sponge-cuttings, and pouring it upon them; take care not to put in more than the sponge will retain, else, when the bottle is inverted, the ammonia may run out and stain certain colored fabrics.

SMELLS. (*See* DEODORIZERS.)

SMELT.—A small, nearly transparent fish, very abundant from October to April. Fresh smelts have a smell resembling that of cucumbers; when stale they lose their pleasant odor, and also their usual flavor. They weigh from two to four ounces, and are eaten generally bones and all.

Smelt.

Baked Smelts.—Draw the smelts at the gills, wash and wipe them dry in a cloth; pour some clarified butter into the dish in which they are to be sent to table, arrange them neatly in it; strew over them as much salt, mace, and cayenne, mixed, as will season agreeably; cover smoothly with a rather thick layer of very fine bread-crumbs, moisten them equally with clarified butter poured through a small strainer, and bake in a moderately quick oven until the crumbs are of a fine, light brown. A glass of sherry, half a teaspoonful of essence of anchovies, and a dessertspoonful of lemon-juice, may be poured into the dish before the smelts are laid in, and will improve them greatly.

Fried Smelts.—Prepare as for baking; dip into beaten egg-yolk, and then into the finest bread-crumbs, mixed with a very small quantity of flour; fry to a clear light brown, and serve crisp and dry, with celery sauce, sauce tartare, or drawn butter. They may also be dipped into batter instead of bread-crumbs, or rolled in flour only.

SMOKING CHIMNEYS. (*See* CHIMNEYS.)

SMOKE-TREE.—This garden tree or shrub, also called the "purple fringe," presents a fine appearance from midsummer to autumn. It may be planted in spring in any good garden soil, is perfectly hardy, and requires but little care.

SNAKE-BITES.—The rattlesnake and the viper, or adder, are the only snakes in this country whose bites are generally fatal. The more rapidly the symptoms of poison appear after the bite of a snake, the more dangerous it is likely to be. The two fangs of the reptile commonly enter and produce two minute wounds, from which only one or two drops of blood may at first issue. A smarting, burning pain is immediately perceived, the part begins to swell, and a puffiness almost to bursting of the skin spreads in a short time over the whole limb; there is fever, often accompanied by delirium, slow pulse, pain in the region of the heart, and convulsions. These symptoms are attended with a feeling of anxiety and lassitude, laborious

respiration, thirst, nausea, vomiting, and syncope. Death from the bite of a rattlesnake has been known to occur within a few hours. Even if the individual survive the first effects, the wounded part may become livid and gangrenous; and he may sink under the irritative fever which sets in.

Treatment.—As soon as the bite is received apply a ligature to the poisoned extremity as tightly as possible *above* the bite; suck out the wound by the mouth, if the mouth is free from wounds or sores, or with cupping glasses. Afterwards apply red-hot iron or strong caustic, as the fuming nitric acid, to the wound. If the limb swells from the ligature, loosen it for a time, but replace as soon as symptoms of poisoning of the system (contracted pupils slow breathing, convulsions, etc.), occur. A finger or two if bitten by a very poisonous snake should be amputated at once. If the place is such that no ligature can be applied, cut out the wound and surrounding tissues as soon as possible. The patient should be kept quiet, hot spirits and water should be frequently given, but not enough to produce intoxication. It is said that much more can be taken without intoxication than under ordinary circumstances.

SNIPE.—The common snipe (also called English and Wilson's snipe) is one of the most highly esteemed of the smaller birds, the richness and delicacy of their flesh being considered second only to that of woodcock. Their bills are about twice as long as their head, neck short, legs slender, feet bluish gray, feathers brownish black on the back, and grayish yellow below. They are found in the markets from about the 20th of March to the 20th of April, and again in October. There are other varieties of the snipe which are sold under the same name. Among these are the *robin* or *red-breasted snipe*, which are a great delicacy; they are in season in April and May, and again in August, September, and October; the *quail-snipe* (also called Dowicher), which are abundant in April and May, and from about the middle of July till the end of October, being best in September and October; the *black-breasted* or *winter snipe*, which is in season in April and May, and again in September and October; and the *yellow-legged snipe*, which are very plentiful in April and May and again in August and September, but are not much esteemed for the table. Prepare, cook, and serve snipe as directed for WOODCOCK.

SNOW-DROP.—This favorite flower is the earliest blooming of the spring bulbs. Clusters of the roots should be planted in October and November among the grass nearest the house, and early in March and April they will appear in full bloom. They will grow in any soil; but will run out if new homes are not provided for them every three or four years. They multiply rapidly. The great Snow-drop is double the size of the common kind, but does not bloom so early. The small sorts can be planted an inch apart and two inches deep, but the larger ones should be planted five inches apart and four inches deep.

The Snow-drop also succeeds well in the house; a large number must be planted in a pot to make a display. The proper soil for them is loam and sand. The large Crimean snow-drop is very pretty but not common.

SOAP.—All soap is a compound in definite proportions of some oil, fat, or resin, with a saponifying base, which must be alkaline if it is intended for cleansing purposes. Fats are composed of a solid substance called *stearine*, and a liquid one called *oleine*. When either of these is boiled with a strong solution of caustic potash or soda, a remarkable change take place, called *saponification*. The product is a viscid homogeneous and transparent mass, freely soluble in warm water, and partially so in cold, but insoluble in saline solutions. The basis of all scented or toilet soaps is good soap of the ordinary kinds, either soft or hard, which they re-melt and mix with various perfumes. The soaps are first reduced to thin shavings, and these are put in a copper pan with a water-bath; if the soaps are new they will melt on the application of heat, but if they are old a little water is added; when the fusion is complete, some perfume, and, if required, some coloring matter, are added, and the soap is then poured into moulds. *Camphor soap*, for instance, consists of curd soap, oil of rosemary, and camphor; *honey soap*, of yellow soap, fig soft soap and otto citronella; *sand soap* has a large quantity of silver sand sifted into it; and *Fuller's earth soap* contains that detergent. Cheap scented soaps contain a very large proportion of yellow soap, or of common curd. *Medicated soaps* (sulphur, iodine, bromine, creosote, mercurial, and croton oil) for cutaneous diseases, should be used only under medical advice. *Glycerine soap* is pleasant to use, very effective in curing chapped hands, and, though quite unctuous, does not grease the skin.

Bar or Yellow Soap is more economical to buy than to make. Buy a box at a time, cut it into squares, and lay it away on a dry shelf to improve by hardening.

Castile Soap.—The best Castile soap comes from Spain, but an excellent article may be made by mixing the following articles in the given proportions (100 is taken as the unit): —Soda, 9 pounds; olive oil, 76½ pounds; water and coloring matter, 14½ pounds. The coloring matter may be dispensed with.

Hard Soap.—Put six pounds of common washing soda and three pounds of unslacked lime into a pot, and pour over it four gallons of boiling water; let it stand till perfectly clear, and then drain off; pour in two gallons of cold water, let it settle clear, and drain that off into a pan or other vessel. Now add to the soda and lime six pounds of clean fat, and boil them about two hours, till the mixture begins to harden, thinning from time to time with the two gallons of cold water which was poured on the alkaline mixture after draining off the four

gallons of hot water—add it when there is danger of boiling over; try the thickness by cooling a spoonful on a plate. Stir in a handful of salt just before taking from the fire; wet a tub to prevent sticking, turn the soap into it and let it stand till solid; then cut it into bars, and put on a board to dry (it should dry two or three months). This will make about forty pounds of soap, greatly superior to the common bar or yellow soap.

Myrtle Soap.—Dissolve two pounds and a quarter of white potash in five quarts of water, then mix it with ten pounds of myrtle wax. Boil the whole over a slow fire till it turns to soap, then add a tea-cup of cold water—let it boil ten minutes longer—at the end of that time turn it into tin moulds or pans, and let them remain a week or ten days to dry, then turn them out of the moulds. If you wish to have the soap scented, stir into it any essential oil that has an agreeable smell, just before you turn it into the moulds. This kind of soap is excellent for shaving and chapped hands—it is also good for eruptions on the face. It is fit for use three or four weeks after it is made, but it is better in ten or twelve months.

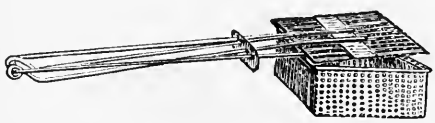
Soft Soap.—I. Place 20 pounds of grease in a barrel, pour upon it a hot lye, made by boiling sixteen pounds of potash, or caustic soda in four gallons of water. Mix well; let it stand till the grease is eaten up; then fill up the barrel with cold soft water.

II. Heat twenty-six pounds of clean grease; when melted, mix with it a lye made by dissolving twenty pounds of white potash in ten gallons of water. Let the whole stand in the sun, stirring it frequently; in about a week fill the barrel with weak lye. When more convenient, a lye made by letting water soak through wood ashes (*See* LYE) may be used.

White, or Curd Soap.—This is made of soda and tallow, or olive oil, but it is more economical to buy it ready-made. It improves with keeping.

Windsor Soap.—To make this celebrated soap nothing more is necessary than to slice the best white soap as thin as possible, and melt it over a slow fire. Remove it from the fire when melted and when it is just lukewarm, add enough of the oil of caraway to scent it; if any other fragrant oil is liked better it may be substituted. Turn it into moulds, and set it in a dry place for five or six days. To make *brown Windsor*, add a little yellow soap to the white, and color with caramel.

SOAP SAVER.—A perforated tin box used in washing china and glass. It is three inches



square, with a stiff wire handle. Place the soap in the box, shake it in the hot water to make a suds, then hang it up to dry.

SODA.—The alkali used in cookery, under the name of soda, is the *crystalized carbonate of soda*. That used for washing is *sal soda*. It was once made by burning sea-weed, but is now by decomposing common salt. It should be bought in moderate quantities and kept in tightly corked jars.

Bicarbonate of Soda only occurs in powder. It is but slightly alkaline, and not at all caustic. The preparations are an effervescing solution—medicinal soda-water, and a lozenge. Ordinary soda-water contains no soda, only carbonic acid; if it is desired to have soda in it, the specially prepared soda-water must be used. Bicarbonate of soda is much used as an antacid, and to render other substances alkaline. It sits better on the stomach than bicarbonate of potash. It does not act so much on the kidneys, and is less often given in acute rheumatism. For ordinary antacid purposes, especially to allay heart-burn, it is more used than the potash salt. The dose is from 5 to 30 grains, but more may be given, though seldom necessary.

Sulphate of Soda, better known as Glauber's salt, is a substance which most undeservedly has fallen out of repute. It abounds in certain mineral waters and sea water. When pure it is colorless and transparent. Its taste is exceedingly bitter. It acts as a purgative, producing copious watery motions. It is the most important purgative constituent of many mineral waters. The Carlsbad waters, which have a deservedly high repute in affections of the liver, are chiefly efficacious through the Glauber salts, which they contain. It may be given in doses of 2 drams to half an ounce. It is best mixed with some other purgative.

Acetate of Soda is only used in the preparation of arseniate and phosphate of iron. By itself it can hardly be said to be used, acetate of potash taking its place.

Sulphite of Soda is much more important, not for its soda, but for its sulphurous acid. In making it, sulphurous acid is passed through carbonate of soda to saturation. It exists in prisms which have a slight odor of sulphurous acid, readily soluble in water. It is given internally in the same cases as sulphurous, especially to arrest vegetable growth in the form of sarcinæ, etc. Externally it may be used as a lotion, where the acid would not be desirable. The dose is 20 grains to a dram.

Hyposulphite of Soda is frequently employed in the same way as the sulphite, but in the pharmacopœia it is only introdueed for analytic purposes. It occurs in crystals readily soluble in water. Sometimes it is used as a mouth wash.

Phosphate of Soda, or tasteless purging salt, is got by adding to a solution of bone earth in sulphuric acid, carbonate of soda to neutralization, or more. The salt then formed appears in fine large crystals of a saline taste. In good large doses it purges, and having no disagreeable taste, is very useful for children and delicate persons. It requires to be given

in doses of half an ounce or so. It is best given in soup or broth, in which it is as nearly as possible tasteless. In smaller doses it acts on the kidneys, but is not much used this way. The dose is 20 or 30 grains.

Chlorinated Soda owes its efficacy not to the soda it contains but the chlorine. It is a bleaching solution constituted in the same way as bleaching powder, and used for similar purposes. It is alkaline in reaction, and is sometimes made into a poultice. Internally, it has been given to get rid of fœtid sloughs in the alimentary track, but is better used as a gargle, as in ulcerated mouths and sore throats. Externally it may be used much diluted as a wash to fœtid sores. It is not much given internally. The dose is 10 or 20 drops freely diluted.

Chloride of Sodium, or common salt, is more important as a food than a medicine. If not used ill-health follows, the bowels get disordered, and worms form. In large doses it is emetic, and it may even give rise to dangerous consequences. It is chiefly used as an emetic in cases of poisoning where no other remedy is at hand. Two or three tablespoonfuls may be given well stirred about in lukewarm water, followed by copious draughts of the same. Warm salt water baths are frequently useful in chronic rheumatic pains. (*See* SALT.)

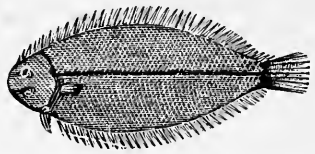
The Citro-Tartrate of Soda, is a salt in many respects similar to Rochelle salt, which contains tartaric acid only. It is this substance in the granulated form which is commonly called citrate of magnesia. If well prepared and well kept, it constitutes a good laxative and sits well on the stomach. If not kept in carefully stoppered bottles, the carbonic acid is gradually given off and it will not effervesce. The dose is about a dram or two drams. (*See* ROCHELLE SALT.)

SODA-WATER.—A well-known effervescing beverage, consisting of water impregnated with carbonic acid gas. In many cases of fever and thirst this is a very pleasant and grateful beverage ; and when mixed with a brandy or wine it forms an exhilarating draught in periods of exhaustion and depression, often being preferable to champagne, as it contains no sugar. A substitute may be made by dissolving, in separate glasses, one-third filled with water, thirty grains of bi-carbonate of soda and twenty grains tartaric acid. Mix.

SOLANUM.—A family of climbing vines, the most attractive of which is the Bitter-sweet (*celastrus scandens.*) In the autumn, when its orange berries are in full color, this is an extremely ornamental vine. It twines so close to the trees that it sometimes chokes out the life of young saplings. It grows wild in great abundance from New England to Arkansas, and bears transplanting and cultivating with good effect.

One member of the family, the *solanum jasminoides*, a pretty climber, with dark green foliage, and large clusters of white flowers, is an excellent house-plant and shows to great advantage trained around a window or to cover a frame-work. If potted in a soil of rich loam, and placed where it can get sun and air, it grows very rapidly, and will bloom all winter.

SOLE.—The *New York sole* is very inferior to the European fish of this name. The



fish commonly called *sole*, is properly *flounder*. It is small and flat, and unusually full of bones.

Fried Soles.—Clean, wash and wipe the fish quite dry; lay them in a large dish and salt and dredge them with flour ; and fry in hot lard, drippings or butter, to a light brown.

SOLUTION.—Salt will dissolve in water, but sand or flint will not; this illustrates the distinction between *soluble* and *insoluble* substances; but every substance is soluble in something; and that something is called its *solvent* or *menstruum*. Thus, limestone will not dissolve in water, but it will in strong acid ; all the metals are insoluble in water, but soluble in some acid : thus oil of vitriol will dissolve copper easily, but lead scarcely at all, except it be heated. Resins are not soluble in water, but are in alcohol. Salt is soluble in cold water as well as in hot ; but water can dissolve only a certain quantity of it, and then the solution is said to be *saturated*. Hot water dissolves more of some salts than cold, and when the hot water cools, it lets fall all the salt above the quantity that it could hold in solution when cold. On the contrary, water will dissolve sugar without any limit, until it becomes a syrup.

Solutions are said to be *concentrated* or *inspissated* when some of the water is driven from the solution by evaporation. This process, with most animal and vegetable matters, is best performed in a water-bath, to prevent burning, as in the case of portable soup.

SORA. (*See* RAIL.)

SORBET. (*See* PUNCH, *Roman*, and SHERBET.)

SORE EYES. (*See* OPHTHALMIA.)

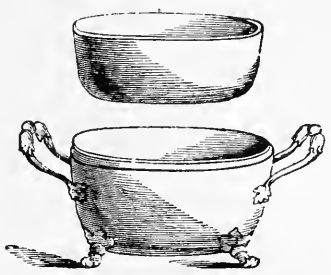
SORE THROAT.—A common symptom in many diseases. It may come from the following causes :—I. A common cold; the throat may be slightly relaxed, or it may be inflamed, and quinsy produced. Wrap some warm flannel around the throat, inhale steam by putting the mouth over a jug of boiling water, keep in a warm room, so as not to breathe in a cold atmosphere, and drink something warm at bedtime, so as to encourage perspiration. (*See* QUINSY.) II. Relaxing and damp weather, or living badly and working hard. For this two or three glasses of good wine at dinner, and swabbing the throat with a solution of tannin and glycerine (tannin, 2 drachms ; glycerine and rose water, 2 oz. each), or tincture of steel and glycerine, are serviceable. III. Scarlet fever, when there will also be the usual rash on the

second day. (*See* SCARLET FEVER.) **IV.** It may come on with an attack of diphtheria, in which case there will be an ashy gray membrane on the fauces and back part of the mouth, without much swelling. (*See* DIPHTHERIA.) **V.** Sore throat now and then comes on in clergymen, but it is very doubtful if it is caused by speaking too much. It is chiefly found among the younger and more studious clergy, who are otherwise out of health. Cold bathing, out-door exercise, and tonics, with regular living, will generally cure it. **VI.** Sore throat is common in those who have had syphilis, and in them there is no swelling of the part, but generally ulceration of the tonsils. These ulcers have a greyish surface, are generally symmetrical, and have a rounded outline; there may be also other symptoms of the disorder, but those who have once had a bad throat are very liable to another slight attack on taking cold. Iodide of potassium and mercury form the best remedy in such cases, and the throat should be brushed over with some astringent solution.

SORGHUM.—A species of sugar-cane, also called *Chinese sugar-cane*, which has been much cultivated in some portions of the South during late years. The grain which it produces is used as food in Asia and Africa, but it is cultivated here only for the syrup and sugar obtained from it. *Sorghum syrup* has a pleasant flavor, and will readily take the place of ordinary syrup or molasses in the principal uses of the latter. Its sweetening flavor is said to be much greater, while the taste is more delicate.

SORREL.—This plant, which grows wild in fields and meadows throughout the country, is used largely in French cookery, and to some extent in English, but is seldom used in this country, and almost never cultivated. There are numerous varieties of it, known as the *French*, *English*, *broad-leaved*, *blistered-leaf*, *round-leaved*, *heart-shaped*, or *wood sorrel*, etc. There is also a species called *tuberous rooted wood sorrel* or *tuberous rooted oxalis*, of which the tubers as well as the leaves are edible. Sorrel is used in salads, sauces, soups, stews, etc., and in France is boiled and served like spinach. It is as well, perhaps, that sorrel is comparatively unknown to our cookery, for such herbs when used at all are used much more liberally by American cooks than by any others, and one of the component parts of the acid which gives to sorrel its extremely acid flavor is oxalic acid, which is a deadly poison.

SOUFFLÉ.—The extreme lightness and delicacy of a well-made *soufflé* render it generally a favorite dish. It may be varied greatly in its composition, but in all cases it must be served the instant it is taken from the oven. A common soufflé-pan costs but little, but those of silver or plated-ware, such as are represented in the engraving, are of course expensive; the paste in which the *soufflé* is baked is placed within the more ornamental dish when it is taken from the oven, and thus sent to table. A plain, round cake-mould, with a strip of letter-paper six inches high, placed inside the rim, will answer very well. The following receipt will serve as a guide for making



Soufflé Pans.

Soufflés: the process is always the same whether the principal ingredient be whole rice boiled very tender in milk and passed through a sieve, bread-crumbs soaked as for a pudding and worked through a sieve also, arrow-root, corn-starch, potato-flour, or anything else of which light puddings in general are made.

Take from a pint and a half of new milk or of cream enough to mix four ounces of rice-flour to a perfectly smooth batter; put the remainder into a clean well-tinned sauce-pan or stew-pan, and when it boils stir the rice briskly to it; let it simmer, stirring it constantly, for ten minutes, or until it is very thick; then mix well with it two ounces of butter, one and a half ounces of sugar, and the grated rind of a lemon (or let the sugar which is used for it be well rubbed on the lemon before it is crushed to powder); in two or three minutes take it from the fire, and beat quickly to it by degrees the yolks of six eggs; whip the whites to a very stiff froth, and when the pan is buttered and all else quite ready for the oven, stir them gently to the other ingredients; pour the mixture immediately into the pan, and put it in a moderate oven, of which keep the door closed for a quarter of an hour at least. When the *soufflé* has risen very high, is of a fine color, and quite done in the centre, as it will be in from a half to three quarters of an hour, send it instantly to table.

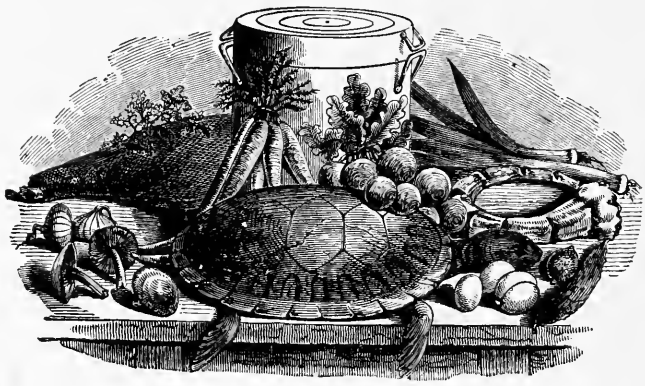
The *soufflé* may be flavored with vanilla, orange-flowers, or anything else that is liked. Chocolate and coffee also may be used for it with soaked bread: a very strong infusion of the last, and an ounce or two of the other, melted with a little water, are to be added to the milk and bread. Generally *soufflés* are served under the name of the article used to flavor them, as *soufflé au café* (*soufflé* flavored with coffee.)

A *soufflé* is commonly served in a dinner of ceremony as a remove of the second-course roast; but a good plan is to have it quickly handed round instead of being placed upon the table.

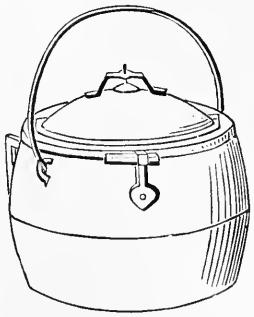
SOUP.—The art of preparing good, wholesome, palatable soup, which occupies so important a place in French cookery, has been very much neglected in this country; yet it presents no difficulties which a little practice and

the most ordinary care will not readily overcome, while if the art were more generally cultivated there would be a certain gain to both pocket and health. For a well-made soup is not only one of the most wholesome forms in which food can be taken, but it is also one of the most economical. Even a very rich soup is less expensive than almost any other dish; and from the varied produce of a well-stocked kitchen-garden, or from the abundance of vegetables in American markets, it may be made excellent at a very trifling cost; and where fish is fresh and abundant it may be cheaply supplied nearly equal in quality to that for which a full proportion of meat is commonly used. No branch of cookery is more worthy of the attention of American housewives.

Directions to the Cook.—In whatever vessel soup is boiled, see that it is perfectly clean, and let the inside of the cover and the rim be equally so. Wash the meat and prepare the vegetables with great nicety before they are laid into it; and be careful to keep it always closely shut when it is on the fire. Never, on any account, set the soup by in it, but strain it off at once into a clean pan, and fill the stock-pot immediately with water; pursue the same plan with all stew-pans and sauce-pans directly they are emptied.



The Soup Digester shown in the cut is a great improvement over the ordinary pot or kettle for making soup. Its construction is such that the water within may be raised to a much higher temperature than 212°, without the heat escaping into space; and the cooking is thus accomplished more effectually, and in a shorter time. An automatic arrangement provides for the escape of steam when a certain pressure is reached, thereby removing all danger from explosion. A "soup digester" should be found in every kitchen.



Soup Digester.

Skim the soup thoroughly when it *first* begins to boil, or it will not be easy afterwards to render it clear; throw in some salt, which will assist to bring the scum to the surface, and when it has all been taken off, add the herbs and vegetables; for if not long stewed in the soup, their flavor will prevail too strongly. Remember that the trimmings, and the *bones* of fresh meat, the necks of poultry, the liquor in which a joint has been boiled, and the shank-bones of mutton, are all excellent additions to the stock-pot, and should be carefully reserved for it. The remains of roast poultry and game also will improve both the color and the flavor of broth or soup. (*See* STOCK.)

Let the soup be very slowly heated, and after it has been well skimmed, and has boiled for a few minutes, draw it to the side of the stove and keep it *simmering softly*, but without ceasing, until it is done; for on this as will hereafter be shown, its excellence principally depends.

Pour boiling water, in small quantities at first, to the meat and vegetables of which the soup is to be made when they have been fried or browned; but otherwise, always add *cold* water to the meat.

Unless precise orders to the contrary have been given, onions, eschalots, and garlic should be used for seasoning with great moderation; for not only are they very offensive to many eaters, but to persons of delicate habit their effects are sometimes extremely prejudicial; and it is only in coarse cookery that their flavor is allowed ever strongly to prevail.

A small portion of sugar, about an ounce to the gallon, will very much improve the flavor of

gravy-stock, and of all rich brown soups; it may be added also to some others with advantage; and for this directions will be given in the proper places.

Two ounces of salt may be allowed for each gallon of soup or broth, in which large quantities of vegetables are stewed; but an ounce and a half will be sufficient for such as contain few or none; it is always easy to add more if needful, but oversalting in the first instance is a fault for which there is no remedy but that of increasing the proportions of all the other ingredients, and stewing the whole afresh, which is troublesome and for which there may not be time.

As no particle of fat should be seen floating in soup when it is sent to table, it is desirable that the stock should be made the day before it is wanted, that it may be quite cold; when the fat may be entirely scraped off without difficulty.

Spices should be put in whole into soups; allspice is one of the best, but beware of using it too freely. *Seville orange-juice* has a finer and milder acid than lemon-juice; but both should be used with caution. *Sweet herbs*, for soups or broths, consist of knotted marjoram, thyme, and parsley, a sprig of each tied together. The older and drier onions are, the stronger their flavor; in dry seasons, also, they are very strong; the quantity should be proportioned accordingly. Although celery may be generally obtained for soup throughout the year, it may be useful to know that a drachm of dried celery seed will enrich half a gallon of soup as much as will two heads of celery. *Mushrooms* are much used, and when they cannot be obtained fresh, mushroom catsup will answer the purpose; but it should be used very sparingly, as nothing is more difficult to remove than the over-flavoring of catsup. A good proportion of *wine* is a gill to three pints of soup; this is as much as can be used without the vinous flavor predominating, which is never the case in well-made soups. Wine should be added late in the making, as it evaporates very quickly in boiling.

When Cayenne pepper is not mixed with the thickening, grind it down with the back of a spoon and stir a little liquid to it before it is thrown into the stew-pan, as it is apt to remain in lumps, and so occasion great irritation of the throat when swallowed.

For *thickening* soups, arrow-root is best for white soups, and rice-flour for all others. It should be passed through a lawn sieve, blended thoroughly with the salt, spices, catsup or wine used in flavoring; sufficient liquid should be added to it very gradually to render it of the consistency of batter, and it should also be perfectly smooth—to keep it so it should be moistened sparingly at first, and beaten with the back of a spoon until every lump has disappeared. The soup should boil quickly as the thickening is stirred into it, and be simmered for ten minutes afterwards. From an ounce and a half to two ounces of rice-flour will thicken a quart of soup.

Serve all soups *as hot as possible*.

Apple Soup.—Clear the fat from five pints of good mutton broth, *bouillon*, or shin of beef stock, and strain it through a fine sieve; put it on the fire, and when it boils, add a pound and a half of good cooking apples, and stew them down in it to a smooth pulp; press the whole through a strainer, add a small teacupful of powdered sugar and plenty of pepper; simmer the soup for a couple of minutes, skim, and serve it very hot, accompanied by a dish of boiled rice.

Artichoke Soup. (*See* PALESTINE SOUP.)

Asparagus Soup.—Cut three pounds of veal and half a pound of salt pork into small pieces, pour a gallon of water to it, and boil an hour; then add the stalks of *three* bunches of asparagus cut into bits an inch long; boil two hours longer and strain, pressing the pulp of the asparagus very hard to extract the green coloring; return the liquor to the pot, add the heads of the asparagus, and boil briskly twenty minutes; then season with pepper. Lay small squares of toast in the bottom of the tureen, pour the soup over them, and serve at once.

Bean Soup.—Any kind of dried beans will answer for this purpose. Soak a quart of them over night in lukewarm water; next morning put them on to boil with a gallon of cold water and a couple of pounds of salt pork; cover the pot, and boil slowly for *three* hours; then add a head of celery shred fine, and season well with pepper; simmer half an hour longer, strain, and serve hot. Send round slices of lemon with it.

Beef Soup.—**I.** For very choice beef soup see BOUILLON and JULIENNE (below). A very good beef soup may be made as follows:—Shred a head of celery and one quarter of a head of white cabbage very fine; cut two turnips, three carrots, and two onions into quite small pieces; put all together into a soup-pot, with half a gallon of cold water, and boil it two hours; then add two quarts of good beef-stock and boil an hour longer; mix three tablespoonfuls of flour with half a pint of water, adding a little salt and pepper, and half an hour before serving stir it into the soup; put two tablespoonfuls of Indian soy into the tureen first; pour in the soup, stir it up from the bottom, and serve.

Soup made as above may be served as *clear beef soup* by laying some squares of toast in the bottom of the tureen, and straining the soup over them through a sieve.

Very good beef soup may be made of beef-bones, scraps of beef-steak, etc., by cracking the bones well, and boiling them slowly till good stock is made; then add any kind of vegetables, season with pepper and salt, and either thicken with flour (rice-flour is best) or serve clear.

II. (Brown).—Put a piece of the round of beef, weighing about six pounds, into a pot with four or five quarts of cold water; add salt and pepper and a dozen cloves, and boil three hours; then cut three carrots and two turnips into dice, and mince fine two onions and a head of celery; add all these to the beef, with two slices of bread toasted brown; boil two hours

longer, take out the meat, add a little soy, and serve hot.

The meat may be stewed next day with vegetables.

Bouillabaisse.—This soup or stew is extremely popular throughout France, but is made in greatest perfection at Marseilles. The basis of it is fish, and the more kinds of fish there are in it the better; it must never contain less than two kinds. There are a hundred different ways of making it, and the following is easy and simple compared with some of them:—Put a gill of sweet-oil in a tin saucepan and set it over a quick fire, and when it is hot add two onions and two cloves of garlic sliced; stir so as to partly fry them, and then remove from the fire. Now put into the pan about three pounds of fish cut into pieces about two inches long,—halibut, haddock, turbot, whitefish, or any similar fish will do,—adding also a dozen muscles dropped into boiling water and taken from the shell; season with a gill of white wine, a bay-leaf, two cloves, two slices of lemon, the juice of a tomato, salt, pepper, and a pinch of saffron; cover the whole with cold water, and set the pan back on the fire, which should be brisk; let it boil half an hour, then add a teaspoonful of chopped parsley, and boil ten minutes longer. The usual way of serving is to put some slices of bread or toast in the bottom of a deep dish and turn the soup over it; but a nicer way is to take out the fish and serve it on a separate dish, pouring the sauce only over the bread. In the latter case, serve a slice of bread and a piece of fish covered with the sauce to each person. The garlic and saffron may be omitted if not liked.

Bouillon.—This soup, or *broth* as we should perhaps designate it, is made once or twice in the week, in every family of respectability in France; and by the poorer classes as often as their means will enable them to substitute it for the vegetable or *maigre* soups, on which they are more commonly obliged to subsist. It is served usually on the first day with slices of untoasted bread soaked in it; on the second, it is generally varied with vermicelli, rice, or the like. The ingredients are, of course, often otherwise proportioned than as we have given them, and more or less meat is allowed according to the taste or circumstances of the persons for whom the *bouillon* is prepared; but the process of making it is always the same, and is thus described (rather learnedly) by one of the most skilful cooks in Europe: "The stock-pot of the French artisan," says Monsieur Carême, "supplies his principal nourishment; and it is thus managed by his wife, who, without the slightest knowledge of chemistry, conducts the process in a truly scientific manner. She first lays the meat into an earthen stock-pot, and pours cold water to it in the proportion of about two quarts to three pounds of the beef; she then places it by the side of the fire, where it slowly becomes hot; and as it does so, the heat enlarges the fibre of the meat, dissolves the gelatinous substances which it contains, allows the albumen (or the muscular part which produces the scum) to disengage itself, and rise to the surface, and the OZMAZOME (*which is the most savory part of the meat*) to be diffused through the broth. Thus, from the simple circumstance of boiling it in the gentlest manner, a relishing and nutritious soup will be obtained, and a dish of tender and palatable meat; but if the pot be placed and kept over a quick fire, the *albumen* will coagulate, harden the meat, prevent the water from penetrating it, and the *osmazome* from disengaging itself; the result will be a broth without flavour or goodness, and a tough, dry bit of meat."

Bouillon Bowl.

It must be observed in addition, that as the meat of which the *bouillon* is made, is almost invariably sent to table, a part of the rump, or the leg-of-mutton piece of beef, should be selected for it; and the simmering should be continued only until this is perfectly tender. When the object is simply to make good, pure-flavored, beef broth, part of the shin or leg, with a pound or two of the neck, will best answer the purpose. When the *bouilli* (that is to say, the beef which is boiled in the soup), is to be served, bind it into a good shape, add to it a calf's foot if easily procurable, as this much improves the quality of the *bouillon*; pour cold water to it in the proportion mentioned above, and proceed, as Monsieur Carême directs, to heat the soup *slowly* by the side of the fire; remove carefully the head of scum which will gather on the surface before the boiling commences, and continue the skimming at intervals for about twenty minutes longer, pouring in once or twice a little cold water. Next, add salt in the proportion of two ounces to the gallon; this will cause a little more scum to rise; clear it quite off and throw in three or four turnips, as many carrots, half a head of celery, four or five young leeks, an onion stuck with six or eight cloves, a large half tea-spoonful of peppercorns, and a bunch of savory herbs. Let the whole stew *very* softly without ceasing, from four hours and a half to six hours, according to the quantity: the beef in that time will be extremely tender but not overdone, and is excellent eating. It should be served with a couple of cabbages, which have been first boiled in the usual way, then pressed very dry, and stewed for ten minutes in a little of the broth, and seasoned with pepper and salt. The other vegetables from the *bouillon* may be laid round it or not at choice. The soup if served on the same day must be strained, well cleared from fat, and sent to table with fried or toasted bread; or

slices of untoasted bread may be laid in the bottom of the tureen, and the soup poured over them.

Calf's-head Soup. (*See* MOCK-TURTLE SOUP.)

Carrot Soup.—Boil some highly colored carrots in some slightly-salted water till they are quite tender; then mash them to a smooth paste, and mix with them boiling gravy-soup or strong beef-broth (*see* BOUILLON), in the proportion of two quarts to a pound and a half of the mashed carrots; pass the whole through a strainer, season it with salt and cayenne, heat it in a clean stew-pan, and serve it very hot.

A finer carrot soup may be made by cutting the carrots into quarter-inch slices, stewing two pounds of these in three ounces of butter for an hour (without browning), and then adding four pints and a half of brown gravy soup; simmer gently an hour longer, press the whole through a sieve or strainer, season with salt and cayenne, boil five minutes, taking off all the scum, and serve as hot as possible.

Chestnut Soup.—Strip the outer rind from some fine, sound Spanish chestnuts, throw them into a large pan of warm water, and as soon as it becomes too hot for the fingers to remain in it, take it from the fire, lift out the chestnuts, peel them quickly and throw them into cold water as they are done; wipe and weigh them; take three-quarters of a pound for each quart of soup, cover them with good stock, and stew them gently for upwards of three-quarters of an hour, or until they break when touched with a fork; drain and pound them smoothly, or bruise them to a mash with a strong spoon, and rub them through a fine sieve reversed; mix with them by slow degrees the proper quantity of stock; add sufficient mace, cayenne and salt to season the soup, and stir it often until it boils. Three-quarters of a pint of rich cream, or even less, will greatly improve it. The stock in which the chestnuts are boiled can be used for the soup when its sweetness is not objected to; or it may in part be added to it.

Chicken Soup.—A full-grown fowl is best for making soup. Cut it into pieces as for frying, and put these with half a pound of ham into a pot; just cover with cold water, and stew gently for an hour, or until the breast will cut easily; take out the breast, leaving the remainder of the meat in the pot, add about three quarts of boiling water, and let it stew slowly. Now chop the white meat of the breast very fine, and add it to the yolks of four hard-boiled eggs which have been previously rubbed to a smooth paste with a few spoonfuls of the soup; add also about a teacupful of fine bread-crumbs, and roll the mixture into small balls. When the soup has boiled till the meat will drop easily from the bones, strain the soup away from the meat and bones, season with salt, white pepper, and chopped parsley, and return to the fire; drop in the meat-balls, boil ten minutes, and then add by degrees a pint of milk thickened with flour; boil up once and serve.

The meat-balls may be omitted, and all the meat boiled till reduced to shreds, but the soup will not be so nice.

Cocoanut Soup.—Pare the dark rind from a fresh cocoanut; grate the meat fine; put five ounces to five pints of veal stock, gravy soup, or beef-broth, and simmer it gently for an hour; then strain off the soup, pressing the cocoanut hard; thicken with five ounces of rice-flour, a little salt and pepper, and half a teaspoonful of ground mace mixed with a quarter of a pint of cream; boil ten minutes, and serve hot.

When cream is not at hand a half pint of the stock will do to mix the thickening, etc., in.

Comsomme.—*See* CONSOMME.

Cucumber Soup.—Pare, split, and empty from eight to twenty fine, well grown, but not old cucumbers,—those which have the fewest seeds are best for the purpose; throw a little salt over them, and leave them for an hour to drain, then put them with the white part only of a couple of mild onions into a deep stew-pan or clean sauce-pan, cover them nearly half an inch with pale, but good veal stock, and stew them gently until they are perfectly tender, which will be in from three-quarters of an hour to an hour and a quarter; work the whole through a hair sieve, and add to it as much more stock as may be needed to make the quantity of soup required for table; and as the cucumbers, from their watery nature, will thicken it but little, stir to it when it boils, as much arrow-root, or rice-flour, as will bring it to a good consistence; add from half to a whole pint of boiling cream, and serve the soup immediately. Salt and cayenne sufficient to season it, should be thrown over the cucumbers while they are stewing. The yolks of six or eight eggs, mixed with a dessertspoonful of chili vinegar, may be used for this soup instead of cream; three dessertpoonfuls of minced parsley may then be strewed into it a couple of minutes before they are added; it must not, of course, be allowed to boil after they are stirred in.

Eel Soup.—Skin and clean three pounds of eels and cut them into pieces about two inches long; put them into a pot, with half a pound of salt pork chopped fine, and pour to them two quarts of cold water; season with chopped sweet herbs, and a head of celery chopped fine (a small bag of celery seed may be used when celery is not in season); boil an hour, or until the fish and pork are in shreds; and then strain; return the soup to the pot, add a pint of hot milk, two well-beaten eggs, and a level tablespoonful of butter; boil up once, and serve with dice of toasted bread on the top. This is a rich and savory soup.

Fish Soup.—An infinite variety of excellent soups may be made of fish, which should be stewed down for them in precisely the same manner as meat, and with the same addition of vegetables and herbs. When the skin is coarse or rank it should be carefully stripped off before the fish is used, and any oily particles

which may float on the surface should be entirely removed from it. Most fish soups are improved by adding a little anchovy or any other store *fish*-sauce; prawns and shrimps are also generally considered an improvement.

For very savory soups, fry the fish and vegetables, lay them into the soup-pot, and add boiling instead of cold water.

Giblet Soup.—Take the giblets, feet, neck, and wings of two fowls, and put them into a pot with a pound and a half of veal and a slice of lean ham; pour to them three quarts of cold water, and boil gently till the meat is very soft; then strain off the liquor, and when cold, scrape off the fat, cut the giblets and meat into half-inch dice; make a thickening with a tablespoonful of flour and a tablespoonful of butter mixed with a little of the soup; add all these to the soup, with some sweet herbs tied in a bag, and a little salt; boil half an hour, and serve.

Gravy Soup.—I. Cut two pounds of beef from the neck into dice and fry until brown. Break small two or three pounds of bones and lightly fry them; bones from which streaked bacon has been cut make an excellent addition, but too many must not be used lest the soup be salt. Slice and fry brown a pound of onions, put them with the meat and bones and three quarts of cold water into the soup-pot, let it boil up, and having skimmed, add two large turnips, a carrot cut in slices, a small bundle of sweet herbs, and half a dozen peppercorns. Boil gently for four or five hours, and about one hour before it is finished add a few bits of celery or celery-seed tied in muslin. When done, strain the soup, and let it get cold in order to remove all the fat; then put on the fire again, and when it boils stir into it a tablespoonful of rice-flour mixed in four tablespoonfuls of cold water; season to taste and serve. Small force-meat balls are an improvement to this soup.

II. The shin or leg of beef, if not large or coarse, will answer for this soup, and afford at the same time a highly economical dish of boiled meat, which will be found very tender, and very *palatable* also, if it be served with a sauce of some piquancy. From about ten pounds of the meat let the butcher cut evenly off five or six from the thick fleshy part, and again divide the knuckle, that the whole may lie compactly in the vessel in which it is to be stewed; pour in three quarts of cold water, and when it has been brought slowly to boil, and been well skimmed, as directed for *bouillon*, throw in an ounce and a half of salt, half a teaspoonful of peppercorns, eight cloves, two blades of mace, a faggot of savory herbs, a couple of small carrots, and the heart of a root of celery; to these add a mild onion or not, at choice. When the whole has stewed very gently for four hours, probe the larger bit of beef, and if quite tender, lift it out for table; let the soup be simmered from two to three hours longer, and then strain it through a fine sieve, into a clean pan. When it is perfectly cold, clear off every particle of fat; heat a couple of quarts, stir in, when it boils, half an ounce of sugar, a small tablespoonful of good soy, and twice as much clear and fine mushroom or other catsup. If carefully made, the soup will be perfectly transparent and of good color and flavor. A thick slice of lean ham will improve it, and a pound or so of the neck of beef with an additional pint of water, will likewise enrich its quality. A small quantity of good broth may be made of the fragments of the whole boiled down with a few fresh vegetables.

Caper sauce, or hot horse-radish sauce, or any other sharp sauce, may be served with the portion of the meat which is sent to table.

Gumbo or Okra Soup.—Put two quarts of okras sliced thin into a pot with two pounds of beef and half a pound of ham cut into small pieces; pour in just enough cold water to cover them, and stew gently for an hour; then add a quart of sliced tomatoes, and two quarts of boiling water; boil three-quarters of an hour longer, skimming often. When the meat and vegetables have boiled to pieces, add four tablespoonfuls of butter, a pinch of cayenne pepper, and a little salt, if the ham has not made it salt enough; strain and serve hot. A little vermicelli may be added to this soup after it is strained.

Gumbo.—II. (CHICKEN).—Cut a good sized fowl as for a fricasee, season with salt and pepper, dredge with flour, put it in the soup kettle with two ounces of butter, one of lard and two of onion, chopped fine; fry until quite brown, then add four quarts of hot water, cover and let it simmer for two hours; add a handful of tender, chopped okra and let it simmer half an hour longer; add a pinch of cayenne with twenty or thirty oysters; when these are well puffed, remove the kettle from the fire, sprinkle half a teaspoonful of *filet* powder over the soup, beating it in quickly, then serve at once.

For *filet* powder, gather sassafras leaves in August; dry them in the shade, powder them, sift and bottle. It is for sale in the New Orleans market and probably in other southern cities. Prof. Dimitry says: "Never attempt to add the sassafras while the vessel is on the fire. The result would be to precipitate the powder, and literately send your gumbo to pot."

Hare Soup.—Half roast a hare, and having cut away the meat in long slices from the backbone, put it aside to make an entrée. Fry four onions, a carrot and turnip, a little celery, some bacon bones or a slice of lean ham, and having cut the body of the hare up into small pieces, put all on to boil in two quarts of good stock. When you have skimmed the pot, cover close and allow it to boil gently for three hours, then strain it, take off every particle of fat, and having allowed it to boil up, thicken it with a dessertspoonful of corn-flour. Stir in two lumps of sugar, a glass of port wine, and season if necessary.

Hasty Soup.—Mince together a pound of lean beef, mutton, or veal, a small carrot, a small turnip, half an ounce of celery, the white part of a medium sized leek or a very small onion;

and put them into a deep sauce-pan with three pints of cold water; when the soup boils, take off the scum, and add a little salt and pepper. In half an hour it will be ready to serve with or without straining; it may be flavored with cayenne, catsup, or anything else that is preferred.

Jenny Lind's Soup.—This receipt does not merely bear the name of "Mademoiselle Lind," but is in reality that of the soup which was constantly served to her, as it was prepared by her own cook.

Wash a quarter of a pound of the best pearl sago until the water poured from it is clear; then stew it quite tender and very thick in water or thick broth (it will require nearly or quite a quart of liquid, which should be poured to it cold, and heated slowly): then mix gradually with it a pint of good boiling cream, and the yolks of four fresh eggs, and mingle the whole carefully with two quarts of strong veal or beef stock, which should always be kept ready boiling. Send the soup immediately to table.

Julienne Soup.—Wash and scrape a large carrot, cut away all the yellow parts from the middle, and slice the red outside an inch in length, and the eighth of an inch thick; take an equal quantity of turnip, and three small onions, cut in a similar manner; put them in a stew-pan with two ounces of butter and a pinch of pounded sugar, stir over the fire until a nice brown color, then add a quart of clear, well-flavored stock, and let all simmer together gently for three hours; when done skimthe fat off very carefully, and ten minutes before serving add a cabbage lettuce cut in shreds and blanched for a minute in boiling water; simmer for five minutes and the soup will be ready. Any clear soup may be converted into Julienne by adding prepared vegetables as above.

Lobster Soup.—Boil a shin of veal for three or four hours in a gallon of water, with two carrots, two onions, salt, and mace. At the time of putting the veal on the fire break up a large lobster and take the meat out of the shell; break up the shell and put it into a sauce-pan, with water enough to cover it, and let it simmer while the soup is boiling. Strain the soup from the meat and vegetables, and the liquor from the lobster-shell, and put them together into the soup-pot; cut the lobster-meat up very fine add it to the soup, and boil two hours longer. If there was a row of coral (spawn) in the lobster, grate it, and add it with the minced meat. When nearly done,add a quarter of a pound of butter mixed with two tablespoonfuls of flour, a teacupful of white wine and a tablespoonful of vinegar, or the juice of a lemon; boil ten minutes, and serve hot.

Maccaroni Soup.—Throw four ounces of maccaroni (the best Italian) into a pan of fast-boiling water, with about an ounce of butter, and a small onion stuck with three or four cloves; when it has swelled to its full size and become tender, drain it well, cut it into half-inch lengths, and drop it into two quarts of clear gravy soup; let it simmer for five or ten minutes, when it will be ready for the table. Observe that the macaroni should be boiled quite tender; but it must not be allowed to burst nor to become pulpy. Serve grated Parmesan cheese with it.

Mock-turtle Soup.–To make a single tureen of this excellent English soup in the most economical manner, stew gently down in a gallon of water four pounds of the fleshy part of a shin or neck of beef with two or three carrots, one onion, a small head of celery, a bunch of savory herbs, a blade of mace, a half-teaspoonful of peppercorns, and an ounce of salt. When the meat is quite in fragments, strain off the broth, and pour it when cold upon three pounds of the knuckle or of the neck of veal; simmer this until the flesh has quite fallen from the bones, but be careful to stew it gently or the quantity of stock will be so much reduced as to be insufficent for the soup.

Next, take the half of a fine calf's head with *the skin on*, remove the brains, and then bone it entirely, or let the butcher do this. Strain the soup through a hair-sieve into a clean pan, and let it drain closely from the meat. When it is cold, clear off all the fat from it; roll the head lightly round, leaving the tongue inside, or taking it out, as is most convenient, secure it with tape or twine, pour the soup over, and bring it gently to a boil upon a moderate fire; keep it well skimmed, and simmer it from an hour to an hour and a quarter; then lift the head into a deep pan or tureen, add the soup to it, and let it remain in until nearly cold, as this will prevent the edges from becoming dark.

Cut into quarter-inch slices, and then divide into dice, from six to eight ounces of the lean of raw ham; free it perfectly from fat, rind, and the smoked edges; peel and slice four moderate-sized eschalots, or if these should not be at hand, one mild onion. Dissolve in a well-tinned stew-pan or thick iron sauce-pan which holds a gallon or more, four ounces of butter; put in the ham and eschalots, or onion, with half a dozen cloves, two middling-sized blades of mace, a half-teaspoonful of peppercorns, three or four very small sprigs of thyme, three teaspoonfuls of mixed parsley, one of lemon thyme and winter savory mixed, and when the flavor is liked, the very thin rind of half a lemon. Stew these as gently as possible for nearly or quite an hour, and keep the pan frequently shaken; then put into a dredging box two ounces of fine dry flour, and sprinkle it to them by degrees; mix the whole well together, and after a few minutes more of gentle simmering, add very gradually five full pints of the stock taken free of fat and sediment, and made boiling before it is poured in; shake the pan strongly round as the first portions of it are added, and continue to do so until it contains from two to three pints, when the remainder may be poured in at once, and the pan placed by the side of the fire that it may boil in the gentlest manner for an hour. At the end of that time turn the whole into a hair-sieve placed over a large pan, and if the liquid should not run through freely, knock the

sides of the sieve, but do not force it through with a spoon, as that would spoil the appearance of the stock.

The head in the meanwhile should have been cut up, ready to add to it. For the finest kind of mock turtle, only the skin, with the fat that adheres to it, should be used; and this, with the tongue, should be cut down into one inch squares, or, if preferred, into strips of an inch wide. For ordinary occasions, the lean part of the flesh may be added also, but as it is always sooner done than the skin, it is better to add it to the soup a little later. When it is quite ready, put it with the strained stock into a clean pan, and simmer it from three-quarters of an hour to a full hour; it should be perfectly tender, without being allowed to break. Cayenne, if needed, should be thrown into the stock before it is strained; salt should be used sparingly, on account of the ham, until the whole of the other ingredients have been mixed together, when a sufficient quantity must be stirred into the soup to season it properly. A couple of glasses of sherry or Madeira, with a dessert-spoonful of strained lemon-juice, are usually added two or three minutes only before the soup is dished, that the spirit and flavor of the wine may not have time to evaporate; but it is sometimes preferred mellowed down by longer boiling.

Five minutes before the soup is taken from the fire, drop in force-meat balls made as follows:—Rub the yolks of three hard-boiled eggs to a smooth paste with the back of a spoon, adding gradually the brains which were taken from the calf's head, together with a little pepper and salt, mix with these one egg beaten light, and make the paste into balls about the size of a pigeon's egg.

This is perhaps the most delicious soup made, far superior to real turtle soup. And it is not nearly so difficult to make as the long receipt would seem to indicate.

Mullagatawny Soup.—Slice, and fry gently in some good butter three or four large onions, and when they are of a fine equal amber-color lift them out with a slice and put them into a deep stew-pot, or large thick sauce-pan; throw a little more butter into the pan, and then brown lightly in it a young rabbit, or the prime joints of two, or a fowl cut down small and floured. When the meat is sufficiently browned, lay it upon the onions, pour gradually to them a quart of good boiling broth or stock, and stew it gently from three-quarters of an hour to an hour; then take it out, and pass the stock and onions through a fine sieve or strainer. Add to them two pints and a half more of stock, pour the whole into a clean pan, and when it boils stir to it two tablespoonfuls of curry-powder mixed with nearly as much of browned flour, and a little cold water or broth, put in the meat, and simmer it for twenty minutes or longer should it not be perfectly tender, add the juice of a small lemon, just before it is dished, serve it very hot, and send boiled rice to table with it.

We have given here the sort of receipt commonly used in England for mullagatawny, but a much finer soup may be made by departing from it in some respects. The onions, of which the proportion may be increased or diminished to the taste, after being fried slowly and with care, that no part should be overdone, may be stewed for an hour in the first quart of stock with three or four ounces of grated cocoa-nut, which will impart a rich mellow flavor to the whole. After all of this that can be rubbed through the sieve has been added to as much more stock as will be required for the soup, and the curry-powder and thickening have been boiled in it for twenty minutes, the flesh of part of a calf's head, previously stewed almost tender, and cut as for mock turtle, with a sweetbread also parboiled or stewed in broth, and divided into inch-squares, will make an admirable mullagatawny, if simmered in the stock until they have taken the flavor of the curry-seasoning. The flesh of a couple of calves' feet with a sweetbread or two may, when more convenient, be substituted for the head. A large cupful of thick cream, first mixed and boiled with a teaspoonful of flour or arrow-root to prevent its curdling, and stirred into the soup before the lemon-juice, will enrich and improve it much.

Mutton Soup.—Cut a neck of mutton into chops, paring off every particle of fat; four hours before dinner, put it in the stew-pan, and cover it with boiling water; add four carrots and six small turnips cut in slices, and boil gently till dinner-time; flavor with salt, skim off the fat, and serve. An ounce or two of rice, added with the vegetables, will improve this soup.

Mutton soup may be made in all respects as directed for beef soup, but it is made less savory.

Ox-cheek Soup.—This is an economical soup, and at the same time, if well made, very good. Have the bones of the cheek well broken and wash it well in plenty of salt and water, put it in the soup-pot and cover with water, let it boil ten minutes, then pour away this water; fry six large onions, and put them into the soup-pot with two carrots and turnips, a little celery and blade of mace, six peppercorns and cloves, and as much stock or water as will cover the cheek; let it boil gently for four hours, adding hot water from time to time. Remove the meat from the bones, and choose some of the best pieces to serve in the soup. The remainder can be used for other dishes and is very good. When the soup is done, strain it, and let it get cold in order to remove all the fat; this done, return it to the fire, and when it boils, season to taste, and stir in a tablespoonful of flour or rice-flour mixed in four tablespoonfuls of cold water; boil five or ten minutes and serve. A glass of sherry may be added with the seasoning if liked.

Ox-tail Soup.—I. Get three small tails, joint them, rub them with salt, and soak them in luke-warm water for half an hour; put them

into a stew-pan with four sliced onions, a sliced turnip, a bunch of parsley, a little whole allspice and black pepper, and three quarts of water; when the meat is quite tender, take it out and cut into mouthfuls; thicken the soup with rice-flour or flour stirred in a little cold water, strain it into a clean stew-pan, put in the meat, boil up once, and serve hot.

II. Ox-tail soup is rather insipid in flavor without the addition of some other meat, and the following is a better method of making it:—Joint one ox-tail, and fry the pieces brown in butter; take out the meat and fry in the same pan two carrots and three onions, sliced; when these are done tie them in a bag with a bunch of thyme and drop into the soup-pot. Lay the fried ox-tail also in the pot, and add two pounds of lean beef cut into small slices; grate over them two carrots, season with salt and pepper, and add a gallon of cold water; boil slowly four or five hours. When done, strain, thicken with two tablespoonfuls of browned flour, and boil ten minutes longer. Serve very hot.

Oyster Soup.—I. Boil a knuckle of veal in a gallon of water till the water is reduced to two quarts, strain this broth off and add to it the juice from a quart of oysters; season to taste with pepper and salt, and return to the fire; when it boils well, put in the oysters; when puffed, skim them into the tureen; add 8 rolled crackers, and simmer 5 minutes; add ½ pt of boiling milk; pour on the oysters, and serve.

II. Put three pints of new milk over boiling water; drain two quarts of oysters; put the liquor over the fire; wash the oysters and remove all bits of shell; when the milk is hot add three ounces of butter rubbed smooth with an ounce and a half of flour, and stir until slightly thickened; then add the liquor, which must be well boiled, skimmed and hot; add the oysters; season with salt, white pepper and mace; when the oysters are puffed, serve with a plate of crackers crisped in the oven.

Palestine or Artichoke Soup.—Wash and pare quickly some freshly-dug artichokes, and to preserve their color throw them into clear water as they are done, but take them out as soon as all are ready. Boil three pounds of them in water for ten minutes; lift them out, and slice them into three pints of boiling beef or mutton or veal stock; when they have stewed gently in this from fifteen to twenty minutes, press them with the soup through a fine sieve, and put the whole into a clean saucepan with a pint and a half more of stock; season with salt and cayenne, skim it well, and after it has simmered two or three minutes, stir into it a pint of boiling cream. Serve immediately.

Parsnip Soup.—Put four ounces of butter into a wide stew-pan or sauce-pan, and as soon as it has melted, slice in two pounds of sweet tender parsnips; let them stew very gently till they are quite soft, then pour in gradually enough veal stock or good broth to cover them, and boil the whole slowly from twenty minutes to half an hour; then work it with a wooden spoon through a fine sieve, add as much stock as will make two quarts in all, season with salt and white pepper or cayenne, give it one boil, skim, and serve very hot.

We can recommend this soup to those who like the peculiar flavor of parsnips.

Pea (Dried) Soup.—I. Save the water in which beef or pork has been boiled, and if it is too salt put an equal quantity of fresh water to it; or use fresh water only with roast-beef bones, a ham-bone, and an anchovy or two. Simmer these with some dried peas (whole or split); the smaller the quantity of water at first the better. Simmer till the peas are quite soft; then mash them through a colander, and return the pulp to the soup, with two carrots, a turnip, a leek, and a stick of celery cut into bits, or celery seed; stew until all are quite tender, then season with salt and pepper; strain, and serve with toast cut in dice, or with bread fried in the same shape.

II. (Rich.) Soak a quart of fine yellow split peas for a night, drain them well, and put them into a large soup-pot with five quarts of good brown gravy soup; and when they have boiled gently for half an hour, add to the soup three onions, as many carrots, and a turnip or two, all sliced and fried carefully in butter; stew the whole softly until the peas are reduced to pulp, then add as much salt and cayenne as may be needed to season it well, give it two or three minutes' boil, and pass it through a sieve, pressing the vegetables with it. Put into a clean sauce-pan as much as may be required for table, add a little fresh stock to it should it be too thick, and reduce it by quick boiling if too thin; throw in the white part of some fresh celery sliced a quarter of an inch thick, and when this is tender send the soup quickly to table. A dessertspoonful or more of curry-powder greatly improves pea soup: it should be smoothly mixed with a few spoonfuls of it, and poured to the remainder when this first begins to boil after having been strained.

When more convenient, six pounds of neck of beef, fried brown, may be boiled gently with the peas and fried vegetables in a gallon of water (which should be poured to them boiling) for four or five hours.

Pea (Green) Soup.—I. Put a shin of veal in a gallon of cold water, with two onions and two carrots; season with pepper and salt, set it on the fire and let it boil four hours; then add two quarts of green peas (not very young), and boil an hour and a half longer; strain the soup through a sieve, and return it to the pot; add a quarter of a pound of butter with an ounce of flour, stir well, boil fifteen minutes, and serve.

II. (Excellent.) Take, at their fullest size, but before they are of bad color or worm-eaten, three pints of green peas, and boil them as for table (*See* PEAS) with half a teaspoonful of soda in the water, that they may be very green. When they are quite tender, drain them well, and put them into a couple of quarts of boiling beef or veal stock, and stew them in it gently for half an hour; then work the whole through a fine hair sieve, put it into a clean pan and

bring it to the point of boiling; add salt, should it be needed, and a small teaspoonful of pounded sugar; clear off the scum entirely, and serve the soup as hot as possible. A superior variety of it is made by adding a half pint more of stock to the peas, and about three-quarters of a pint of asparagus points, boiled apart, and well drained before they are thrown into it, which should be done only the instant before it is sent to table.

When there is no stock at hand, four or five pounds of shin of beef boiled slowly down with three quarts of water to two, and well seasoned with savory herbs, young carrots, and onions, will serve instead quite well. A thick slice of lean, undressed ham, or of dried beef, would improve it.

III. A common pea soup for family use may be made somewhat thinner than the last; add to it, just before it is dished, from a half to three-quarters of a pint of young peas boiled tender and well drained. This is often preferred to any other.

Potato Soup.—Mash to a smooth paste three pounds of good mealy potatoes, which have been steamed, or boiled very dry; mix with them by degrees two quarts of boiling broth, or milk; pass through a strainer, set it again on the fire, add pepper and salt, and let it boil five minutes; remove carefully the black scum that will rise upon it; serve very hot with fried or toasted bread. When the flavor of onions is liked, two ounces of them, minced and fried to a light brown, may be added to the soup and stewed in it ten minutes. With milk use grated onion, chopped parsley, and 3 oz of butter.

Pot-au-Feu.—Directions for making this famous French soup are given in its alphabetical place in the book. (*See* POT AU FEU.)

Rabbit Soup.—I. Cut the rabbit up in small pieces, break the bones, and proceed as directed for *Venison Soup*, adding three onions instead of one, and a bunch of sweet herbs. Hares or squirrels may be used instead of rabbit.

II. Cut down into joints, flour, and fry lightly, two full grown, or three young rabbits; add to them three onions of moderate size, also fried to a clear brown; on these pour gradually seven pints of boiling water, throw in a large teaspoonful of salt, clear off all the scum with care as it rises, and then put to the soup a faggot of parsley, four not very large carrots, and a small teaspoonful of peppercorns; boil the whole very softly from five to five and a half hours; add more salt if needed, strain off the soup, let it cool sufficiently for the fat to be skimmed clean from it, heat it afresh, and send it to table with sippets of fried bread. Spice, with a thickening of rice flour, or of wheaten flour browned in the oven, and mixed with a spoonful or two of very good mushroom catsup, or of Harvey's sauce, can be added at pleasure to the above, with a few drops of eschalot wine, or vinegar; but the simple receipt will be found extremely good without them.

Rice Soup.—This soup may be served either thickened with the rice, or clear. For the former, wash and wipe in a dry cloth eight ounces of rice, and add it (in small portions at a time) to four quarts of hot soup (any kind of clear meat soup), of which the boiling must not be checked as it is thrown in; boil it slowly an hour and a half, and serve. When a clear soup is wanted, wash the rice, boil it in water five minutes, drain it well, throw it into as much boiling stock or broth as will keep it covered till it is done, and simmer it very gently until the grains are tender but still separate; drain it, drop it into the soup, and let it remain in it a few minutes before it is served, but without simmering.

An easy mode of making rice soup is this: put the rice into plenty of cold water, set it on the fire, and when it boils add a small quantity of salt; let it simmer ten minutes; then drain it well, throw it into the boiling soup, and simmer it gently from ten to fifteen minutes longer.

Sago Soup.—Wash in several waters, and float off the dirt from three ounces of fine pearl sago; put it into three pints of good cold gravy; let it stew gently from half to three-quarters of an hour, and stir it occasionally, that it may not burn nor stick to the stew-pan. (A quarter of an ounce more of sago to each pint of liquid, will thicken it to the consistence of peas soup.) It may be flavored with a tablespoonful of Harvey's sauce, as much cayenne as it may need, the juice of half a lemon, half an ounce of sugar, and a glass of sherry. Or these may be omitted, and good beef-broth may be substituted for the gravy-soup, for a simple family dinner, or for an invalid. Or again, it may be converted into inexpensive white soup by the addition of some cream smoothly mixed with a dessertspoonful of arrow-root, or of thick cream and new milk in equal portions; veal broth would be the most appropriate for this, or it might be made with half veal and half mutton.

Sorrel Soup.—Carefully wash half a pound of sorrel, and having picked, cut it in shreds; put it into a stew-pan with two ounces of fresh butter, and stir over the fire for ten minutes. Now stir in an ounce of flour, mix well together, and add a pint and a half of good white stock, made as for veal broth. Let it simmer for half an hour. Having skimmed the soup, stir in the yolks of three eggs beaten up in half a pint of milk or cream. Stir in a little pat of butter, and when dissolved pour the soup over thin sippets of French roll in the soup tureen.

Tapioca Soup.—This is made in all respects like sago soup, but it must be simmered from fifty minutes to an hour.

Tomato Soup.—Put three pounds of beef, veal, or lamb into a gallon of cold water, set on the fire and boil the meat to rags and the water down to two quarts; strain the stock away from the meat, and return it to the pot; add two quarts of fresh tomatoes, peeled and cut up very fine, and boil half an hour; season with parsley, or any other green herb, salt and pepper; strain again, stir in a teaspoonful of sugar and a tablespoonful of butter, and serve at once.

Canned tomatoes may be used instead of the fresh; a chopped onion and a handful of chopped okra boiled with the tomatoes would improve the soup.

Turkey Soup may be made from the "leavings" of a roast turkey by the addition of a little fresh meat. Cut two pounds of lean beef into small pieces, and pour to it five pints of cold water; heat it very slowly; skim the liquor when it begins to boil, and add to it an ounce of salt, a small onion, a little celery, and the meat and bones of the turkey, with any gravy or stuffing that may have been left with them. Let these boil gently for about three hours; then strain off the soup through a coarse sieve or cullender, and let it cool till the fat can be entirely removed from it. When this is done, return it to the pot or stew-pan, thicken with rice which has previously been boiled very dry, and season with a heaping tablespoonful of chopped parsley, and as much salt and pepper or cayenne as may be required; boil gently for ten minutes, and serve.

Turnip Soup. —**I.** Make in exactly the same manner as *Carrot Soup*.

II. Wash and wipe the turnips, pare and weigh them; allow a pound and a half for every quart of soup. Cut them in slices about a quarter of an inch thick. Melt four ounces of butter in a clean stew-pan, and put in the turnips before it begins to boil; stew them gently for three-quarters of an hour, taking care that they shall not brown, then have the proper quantity of soup ready boiling, pour it to them, and let them simmer in it for three-quarters of an hour. Pulp the whole through a coarse sieve or soup strainer, put it again on the fire, keep it stirred until it has boiled three or four minutes, take off the scum, add salt or pepper if required, and serve it very hot.

III. Pare and slice into three pints of veal or mutton stock or of good broth, three pounds of young mild turnips; stew them gently from twenty-five to thirty minutes, or until they can be reduced quite to pulp; rub the whole through a sieve, and add to it another quart of stock, a seasoning of salt and white pepper, and one lump of sugar; give it two or three minutes' boil, skim and serve it. A large white onion, when the flavor is liked, may be sliced and stewed with the turnips. A little cream improves much the color of this soup.

Turtle Soup.—**I.** The green turtle is best for this purpose. Cut the desired quantity of the meat into dice, and throw it in boiling water for two or three minutes; then put it into a stew-pan with one-fourth as much ham, also cut in dice, and some sliced onion; season with salt, pepper, parsley, thyme, and bay-leaf; add a wineglassful of Madeira or of good brandy, cover the whole with strong beef or veal broth, set on a good fire, and boil about an hour. Ten minutes before taking from the fire, chop the eggs of the turtle, after having boiled them, and add them to the soup; if the turtle has none, chop and use the yolks of hard boiled eggs instead. When done, throw away the parsley, thyme, and bay-leaf, turn the soup into a tureen, and flavor with grated lemon-peel. Serve hot.

It may be strained before putting it into the tureen, if desired, but it is better to serve the meat with it.

II. (**Dried Turtle.**)—Take a quarter of a pound of dried turtle (*see* TURTLE), soak it in cold water for *three days*, and then stew it in three quarts of strong veal stock for six hours; take the turtle out and set the soup aside to cool; when cold take off all the fat, and return the soup to the pot; fry one small onion in butter, and add it to the soup; boil about ten minutes and strain. Cut the turtle up, not too small, and put it into the strained soup; add a teaspoonful of Worcestershire sauce, and a wineglassful of sherry, season to taste with salt and cayenne, and simmer all together a few minutes before serving. Send sliced lemon round with it. This quantity is enough for twelve persons, is an excellent soup, and costs scarcely half as much as green turtle soup.

Veal Soup.—Take a knuckle of veal and put it into a pot with enough salted water to cover it; add a pound of lean ham, set it on a moderate fire, and boil gently till the meat is very tender; then take up the meat, strain the soup, return it to the pot, and add a head of celery chopped fine, one onion, a carrot and a turnip sliced, four tomatoes also sliced, a dozen peppercorns, and salt to taste; thicken with three tablespoonfuls of rice, or vermicelli, or a thin flour-paste; simmer gently till all the vegetables are done, and serve hot. This is an excellent plain soup.

Vegetable Soup.—Take all kinds of vegetables, slice them thin, put them into a stew-pan with a good lump of butter, and stew until quite tender; then add any stock, gravy, or broth there happens to be in the house, thicken with either flour or bread-crumbs, and season with pepper and salt to taste; boil ten minutes and serve.

Venison Soup.—Cut three pounds of venison and one pound of ham or salt pork into small pieces, and put them into a pot with a head of celery chopped fine and a sliced onion; pour in just enough cold water to cover them, and boil gently for an hour; then add two quarts of boiling water, and season with a few blades of mace and a pinch of cayenne; boil slowly two hours longer, strain the soup from the meat and vegetables, and return it to the pot; salt to taste, and add a tablespoonful of butter; thicken with a tablespoonful of browned flour, made into a thin paste with four tablespoonfuls of cold water; add a tablespoonful of mushroom or walnut catsup, a teaspoonful of Worcestershire or any other pungent sauce, and a wineglassful of sherry, or Madeira; boil five minutes, and serve hot.

Vermicelli Soup.—**I.** Put a shin of veal into a pot with four quarts of cold water, and add two carrots, two turnips, and two onions, all cut up into small pieces; boil slowly for three hours, strain the soup from the meat and vegetables, and return it to the pot; add two

teacupfuls of vermicelli and boil half an hour longer.

(**Without Meat**).—II. Blanch six ounces of vermicelli by setting on the fire in cold water; when it boils, drain off the water and put it again into cold water; let it remain a few minutes, drain the water entirely from it, and put it into a sauce-pan with two quarts of milk; boil it till tender; meanwhile beat up the yolks of four eggs, add gradually to them a pint of boiling cream, and strain through a sieve; now lift off the sauce-pan, add the eggs and cream, a small lump of white sugar, and a teaspoonful of salt; stir the soup over the fire till it is near the boiling-point, and then serve.

White Soup.—Break the bone of a knuckle of veal in one or two places, and put it on to stew, with three quarts of cold water to five pounds of meat; when it has been quite cleared from scum, add to it an ounce and a half of salt, and one mild onion, twenty white pepper-corns, and two or three blades of mace, with a *little* cayenne pepper. When the soup is reduced one third by slow simmering, strain it off, and set it by till cold; then free it carefully from the fat and sediment, and heat it again in a very clean stew-pan. Mix with it, when it boils, a pint of thick cream smoothly mixed with an ounce of good arrowroot, two ounces of very fresh vermicelli previously boiled tender in water slightly salted and *well drained* from it, and an ounce and a half of almonds blanched and cut in stripes. Give it one minute's boiling, and turn into the tureen.

SOUR-KROUT. (*See* SAUER-KRAUT.)

SOUSE.—This is made either of the head, ears, and tongue of pigs (when it is sometimes called *Head-Cheese*), or of the ears and feet only. To make the former:—Boil the head, ears, and tongue in salted water until the meat is ready to drop from the bones; take out the bones, and chop the meat very fine as for sausage. Season the liquor well with pepper, salt, cloves, nutmeg, and cinnamon, or with pepper, salt, and sweet herbs; mix the meat with it, and while hot tie in a strong bag, and lay a board with a heavy stone upon it till quite cold. Or it may be packed into pans or moulds, and a plate with a weight placed over it till cold. In the latter case drain off the liquor as it is pressed out. The souse will be ready for use in two days, or it may be kept several weeks by immersing it in enough cold vinegar to cover it. It is usually sliced and eaten cold for supper, but it may also be fried lightly in butter.

Or, cleanse pigs' ears and feet thoroughly, and soak them in salt and water for a week, changing the water every other day; then boil them till they are tender. When cold, put them into stone jars and pour on them boiling vinegar, strongly spiced with pepper-corns and mace; cloves improve the taste, but turn them a dark color; add a little salt. They may be kept in this way five or six weeks. When wanted, either fry them in lard, or dip them in beaten egg and then in cracker-crumbs before frying. The feet may be eaten cold.

SOY.—Put on the fire 1¾ lbs. of sugar with a half pint of water; boil rapidly until it begins to look frothy, and on being dropped from the spoon has the appearance of thick gum; then slacken the heat and stir it faithfully until it, looks very dark, almost black; then add to it 16 oz of salt, 16 cloves, 5 anchovies, a bunch of thyme, a bunch of marjoram, 12 blades of mace, 8 large bay leaves, and a quart of water; boil until the sugar is dissolved, then strain, and bottle it tightly.

SPASM.—The violent and uncontrollable action of some particular set of muscles. Spasms are generally described as of two sorts, viz.: *tonic* and *clonic*. In tonic spasms the muscles of a part contract violently, and remain rigid and immovable by the will of the patient for a greater or less length of time. Such contractions occur in tetanus and in ordinary cramp. Clonic spasms consist in sudden contraction and relaxations regularly alternating. The jumping of the legs and arms, which occur under certain conditions, are examples of this.

Spasms, again, in the ordinary sense of the word as used by the vulgar, mean gripes, and commonly depend on indigestion and constipation. In most cases they are best relieved by a purgative, containing a good deal of stimulant substance, such as the essential oils. In children, the so-called spasms depend almost invariably on imperfect digestion of food, which ferments in the bowels, and so gives rise to diarrhœa and gripes. To do any permanent good in these cases, it is necessary to reform the diet completely, as they are perhaps most commonly due to giving starchy food too early; or the milk given turns sour. Limewater given along with the milk is a good thing. One particular form of spasm, called *trismus nascentium*, is very fatal to children when newly born. It seems due to a foul atmosphere.

SPECTACLES (Hints on the use of).—From a valuable little book, "Practical Remarks on Impaired Vision," by Mr. Cooper, the well-known London optician, we extract the following:—"It cannot be too strongly urged upon any one about to use spectacles for the first time that that power which will enable him to read without much exertion by candle-light is the only power suitable for him. It is by candle-light only that he should use glasses at first, and as soon as he finds that he stands in need of glasses by day as well as by candle-light, and that the glasses he uses no longer afford him sufficient assistance by candle-light, it will be proper to use the next power for the evening, but for the evening only, and to allow himself the use of the others—and their use only—during the day.

"The greatest caution as to increasing the power of glasses should be observed; for persons who change their glasses, unnecessarily increasing their power each time, are exhausting the resources of art, instead of economizing them as much as possible. Optical aid can only be extended to a certain point, and the steps to that point should be as slow and

as numerous as possible. By exercising prudent precautions, persons may often attain great age, and yet never require the aid of glasses beyond a very moderate power; others, on the contrary, who from ignorance frequently increase the power of their glasses, may run through the whole assortment, and leave themselves only the most inconvenient resources to fall back upon—viz., the very highest powers."*

Common, cheap spectacles sometimes appear to answer as well as those which cost three or four times as much; but cheap glasses are not to be depended upon; they are sometimes ground irregularly and imperfectly, and then they injure the eyes. It is better, therefore, to have spectacles from a respectable optician, who has a character to maintain. Spectacles having lenses called *pebbles*, which is rock crystal, are not liable to be scratched like glass; but they are not in any degree better than those of glass for the eyesight; and if care be taken of the latter they do just as well.

There are three kinds of spectacle-glasses, the *convex*, the *concave*, and the *periscopic*. The first are to correct short sight, the second to correct long sight, while the periscopic are for either. This last description of lens is both concave and convex, the former on the side nearest the eye, the latter on the side furthest from it. For long sight, as well as short, the convexity and concavity are made to differ so as to furnish any required focus. It is to be observed that in glasses of this form the aberration of light is greater than in any other lenses, and that periscopic glasses are liable to be scratched. They have, however, one very great advantage, which is this:—With common glasses, especially concave, the wearer can see only through the exact middle of the lens; he must, therefore, turn his head whenever he directs his view to any lateral object. With periscopic glasses he may see through any part of them, and can observe objects by his side without turning his head. If, however, periscopic glasses be defectively made, they are injurious to the eyes. They should be gauged and examined before they are purchased, to be assured of their accuracy.

SPERMACETI.—A white, waxy substance obtained from the head of the sperm whale, where it lies encased in a large hollow, which contains from half a ton to a ton of it mixed with sperm oil. The two together are pressed in horse-hair bags from which the oil runs out, leaving the spermaceti itself behind, and it only requires to be heated and skimmed, and then washed with a solution of potash to make it fit for the market as *pure spermaceti*. This has little or no smell or taste, and is of a semi-transparent whitish color, which is more brilliant than that of wax. By the assistance of a wick it burns with a clear white flame, superior to that of tallow, and without any disagreeable odor; consequently it is much employed in the manufacture of candles. (*See* CANDLES.) It also possesses the property of softening the skin, and is much used in making cold cream, pomatums, etc. In medicine it is the principal ingredient of the well-known *spermaceti ointment* (consisting of spermaceti, white wax, and almond oil), which is largely used as an emollient, and applied to coverings of various kinds to keep them from adhering to sores. To make, melt together half an ounce of spermaceti, a quarter of an ounce of white wax, and two ounces of almond oil.

SPICE-BUSH.—A favorite shrub for the garden, of which there are many species, all bearing a general resemblance to each other. The foliage is of a light glossy green, which is highly ornamental, and though the flowers are rather dull in color, they are extremely fragrant. The entire plant—leaves, branches, and flowers—is highly aromatic; and it is sometimes called the strawberry shrub, from a fancied resemblance to the odor of that berry. Plant it in spring in a rich soil, and in a sunny part of the garden.

SPICES.—The ordinary spices which are used in housekeeping, and which are sold by the grocers, are *allspice* or *pimento*, *cinnamon*, *cloves*, *ginger*, *mace*, *mustard*, *nutmegs*, and *pepper* (white, black, and cayenne). These are all treated of in their respective places, and need only be enumerated here.

SPINACH.—This excellent vegetable (also called *Spinage*) succeeds well in any good garden soil, and by a succession of crops is kept in season throughout the greater portion of the year. The best varieties are the broad-leaved, Savoy or curly-leaved, and prickly-leaved. The Flanders is the most desirable kind of all, its leaves being the largest and most succulent. The New Zealand Spinach thrives best during the heat of summer. Spinach is generally boiled as greens, but it may also be used in soups and stews.

Boiled Spinach.—Boil it very green and tender in plenty of water, drain, and press all the moisture from it; then chop it fine, put it into a clean sauce-pan, with a slice of butter, and stir the whole until well mixed and very hot; smooth it in a hot dish, mark it in dice, and send to table.

A common English way of preparing spinach is to pick leaf by leaf from the stalks, and to free it by frequent washings from every particle of sand or earth; then put it into a sauce-pan or stew-pan, with the water only which clings about it; throw in a teaspoonful of salt, and keep the spinach constantly pressed down with

* In his "Physiology for Practical Use" Dr. Hinton observes on this point:—"The risk of using them [spectacles] too strong is not great, and the subject may be allowed to select for himself those that suit him best for reading. They ought to enable him to read easily at twelve inches' distance. It is a natural result from the slowly progressive character of the failure of sight, that stronger and stronger glasses will be necessary as age advances. If the progress is rapid, and especially if the glasses do not relieve it so much after a while as they did at first, then advice is needed. You sometimes notice at church an old man with his spectacles on the tip of his nose, and his prayer-book held as far off as possible. These are sure signs that he wants stronger glasses. The effect of putting the spectacles further from the eyes is to increase their power. The glasses used ought, however, to be strong enough to allow of their being kept close to the eyes, and it ought not to be necessary to hold the book more than a foot away."

a wooden spoon, and turned often, for about a quarter of an hour, or until perfectly tender; drain, chop quickly, dish, and serve at once. Garnish with fried bits of bread. Season with butter, cream, pepper, and salt.

SPIREA.—This deservedly popular shrub in some one of its very numerous varieties is found in every garden. It is perfectly hardy, and will thrive without attention under almost any conditions; the foliage is ornamental, and the flowers are both beautiful and profuse. Plant in good soil, and treat every spring to a compost of manure.

Among the best varieties for general cultivation are *S. Bella*, flowers pink, in June; *S. Callosa*, flowers red and pink, all the season; *S. Japonica*, dwarf, flowers white, in June; *S. Opulifolio*, flowers white, in June; *S. Prunifolia*, flowers white, in May; *S. Revesii*, clusters of pure white flowers, in June; *S. Salcifolia*, flowers white, tinted with rose, in June and July.

SPIRIT-LAMP. (*See* LAMP.)

SPIRITS.—This term was formerly applied by chemists to all volatile substances collected by distillation. Three principal kinds were distinguished: inflammable or ardent spirits, acid spirits, and alkaline spirits; at present the name is almost exclusively confined to the first. Pure spirits is alcohol. *Proof spirits* is that which comes up to the legal standard. *Spirits of wine* or *rectified spirit* is the most concentrated form in which it can be prepared in large quantities for the purposes of trade. (*See* ALCOHOL, ARRACK, BRANDY, GIN, LIQUEURS, RUM, WHISKEY, and WINE.)

SPONGE, when new, usually contains a great deal of sand, which must be carefully worked out. The best is extremely fine and soft to the touch, while the common kinds have a rough texture with large pores. Sponge may be kept a long time by attention to the following rules: Never wring a sponge, as this breaks the fibres and injures its elasticity; *squeeze* it as dry as possible after using, and hang it by a string to dry in the air. Leaving it soapy soon spoils a sponge; when used with soap it should be squeezed well in warm water, and left to lie a few minutes in cold.

SPONGE POULTICE.—A sheet of felt or sponge kept by druggists, which can be soaked in hot water and used as a poultice. Very clean and convenient.

SPRAINS.—Wherever muscles and tendons bind together joints or different bones there may be a sprain, but the most common sprains are those of the ankle, wrist, knee, and back. Before proceeding to treat a sprain, be certain that it is one and not a fracture, for the *feeling* is the same in both. Examine the joint carefully, compare it with the other one, and if any bone be loose or pushed out of place, go at once to a physician. If it is only a sprain (a fact which frequently can only be determined by a physician), wrap up the part in several folds of flannel, dipped in water as hot as can be borne with comfort, and cover it with a dry bandage; if possible, with a sheet of oiled silk or sheet gutta percha. If it is very painful, wet a piece of linen or cotton cloth with laudanum, place this next the skin, and cover with the wet flannel as before. Many kinds of poultices have a popular reputation for sprains; so long as they are wet, soft, and warm, they are useful; but nothing is so cleanly and so effective as the laudanum and hot water.

Sprains can only be *cured* by thorough rest of the injured part. The part must be kept quiet not only while painful, but even after the pain has gone; for by exercising the joint too soon, great mischief may be done. Keep the warm applications on constantly till all pain and inflammation are gone; then, twice a day, hold the joint under a tap or stream of cold water for a few minutes, till it begins to feel painful; then bind it up with a common bandage, and bring it back to its work very gradually. A great deal of pain and swelling can be avoided by keeping the limb in a proper position. Whether wrist or ankle, *it must not hang down*. If it be the wrist, let it be comfortably supported in a sling; if the ankle, let the person lie or sit with the foot raised as high as is comfortable. When the back is sprained the patient must lie as quiet as possible in bed until all pain has ceased; as soon as he can sit up comfortably, some stimulating liniment may be used, and a warm poultice applied to the loins.

SPRATS.—There are none of these excellent little fish in or near American waters; they are imported under their French name Sardines.

SPROUTS.—A ragged leaved plant that grows somewhat like the dandelion, in a tuft or cluster of long leaves, which make excellent greens when young and tender. It is in season very early in spring, and remains fit for use until the flower stalk begins to grow, when the leaves become tough and bitter. Sprouts are one of the few vegetables which lose but little of their bulk when boiled. Prepare, cook, and serve as directed for SPINACH.

SPRUCE-BEER. (*See* BEER.)

SQUABS. (*See* PIGEON.)

SQUASH.—The varieties of this excellent vegetable are numerous, but are generally classified as summer and winter squashes. Of the summer varieties the best are the *early bush*, which is the first ready for use, the *yellow butter*, the *scolloped bush*, and the *crook-neck*; these are in season from June to August. Of the winter varieties, the *Boston marrow* is the best of the early sort, *Yokahama* is good, and the *Hubbard* is best of all. The latter will keep all winter, if stored in a dry place. To raise squash, plant four or five seeds together, in hills far enough apart to allow the vines to run. They do well in any good garden soil.

Boiled Squash.—Summer squashes, if very young and tender, may be boiled whole; otherwise it is best to pare them, cutting away as little besides the thin outer rind as possible; quarter them, and take out the seed. Boil till quite tender, and then put them in a strong cloth and press out all the water; mash

them perfectly smooth, season them to taste with salt, pepper, and butter, and serve hot.

Winter squashes require more boiling than the summer kinds. Cut in narrow strips, pare off the rind, drop the pieces into hot water, and boil till tender. Dress as before, or cut in pieces four inches square, bake and serve like potatoes.

SQUILL.—The bulb of the sea onion sliced and dried. It grows along the shores of the Mediterranean, partly in the water.

SQUIRREL.—Cook as directed for RABBIT.

STAIN.—Directions for removing most of the stains which are liable to be received in the operations of the household are given under special articles. (*See* INK-STAINS, MARBLE, MILDEW, MOULD, and PAINT.)

Acid Stains.—These will generally yield to an application of ammonia or hartshorn. To take acid stains out of linen, wet the part and lay on it some oxalate of potash (salt of sorrel), or essential salt of lemons; rub it without diluting with more water, and then wash it out. *Or*, tie up in the stained part some pearlash; then scrape some soap with cold water to make a lather, and boil the linen in it till the stain disappears. Nitric acid stains require the application of permanganate of potash solution and then the fabric while moist should be exposed to the fumes of burning sulphur. If the spot is small, burning a sulphur match under it will usually suffice.

Alkaline Stains.—These should be treated with weak acids; for instance, if the color be taken out of cloth by whitewash, wash it with strong vinegar.

Bleaching powder (chloride of lime) solution, Javelle water or Labarraque's solution should not be applied to any but white goods, as they will usually partially or entirely remove the color from dyed fabrics.

Fruit stains.—Moisten with solution of bleaching powder or javelle water followed by a solution of 1 part muriatic acid to 5 of water.

Mildew on cotton.—Steep in solution of washing soda, then apply solution of bleaching powder or javelle water, and then a solution of one part muriatic acid to 5 of water.

Milk Stains.—Should be first washed with benzine to remove the fatty portion of the milk and afterwards with warm borax water as strong as it can be made and containing potash at the rate of half an ounce to a pint; if the stain is old it cannot always be entirely removed.

Nitrate of Silver Stains.—Wet the spots with cold water, rub into them some powdered iodide of potassium, and let it remain exposed to the light, keeping it slightly damp for a few hours. If the stain is not completely removed, repeat the process.

Paint.—Bisulphide of carbon, or turpentine, will usually prove effective; when old, chloroform will remove it.

Spots on colored fabrics.—May often be removed by a mixture of ammonia and alcohol; the color may sometimes be dulled by the ammonia, when a little weak oxalic acid will brighten it.

Stains of aniline red (magenta).—May be removed by cyanide of potassium.

Tar.—May be removed by first applying butter or oil, allowing it to stand on the spot for a short time then scraping off or otherwise removing the excess and then applying turpentine, afterwards a mixture of turpentine and benzine and finally benzine alone. Paint may also be removed in this manner.

Wine Stains.—Rub the linen on each side with yellow soap, then lay on the mixture of starch and cold water very thick; rub it well in, and expose the linen to the sun and air till the stain comes out. If not removed in three or four days, rub the starch, etc., off, and repeat the application.

STAINING. (For dyeing woven fabrics and leather *see* DYES.)

Bone, Horn or Ivory, may be colored red by first soaking in hydrochloric (muriatic) acid (commercial acid diluted with an equal bulk of water) and then in an ammonia solution of picric (carbazotic) acid and magenta. Use "strong ammonia" diluted with 3 or 4 volumes of water, picric acid in proportion of 1 oz. to 1 gal. of the solution, and magenta enough to give the desired shade. If yellow alone is desired, use the picric acid alone. Blue is applied by a bath containing soluble indigo (sulphate), and carbonate of soda sufficient to neutralize the acid of the solution, so that the last addition of soda gives no perceptible effervescence.

Grasses, &c. may be colored by dipping in water containing coal-tar colors (*see* DYES,) in solution. Hot borax water will color immortelles yellow to orange. If any other color is desired upon immortelles, the yellow coloring matter naturally existing in them must first be removed by dipping them in boiling soap suds and drying, after which the color may be applied.

Metals may be superficially colored by a solution of 4 oz. hyposulphite of soda in 1½ pints of water, mixed with a solution containing 1 oz. sugar of lead in the same bulk of water. The solutions should be mixed cold, the articles then introduced and the temperature gradually raised. Lead and tin are not colored by this process. Iron takes a steel blue, zinc a bronze, and copper or brass a yellow, reddish or blue tint, according to the length of time the articles are immersed, By using blue vitriol (sulphate of copper) instead of the sugar of lead, brass may be made to take a rosy, green or brown color according to the time of immersion.

Wood may be colored *yellow to brown* by the use of nitric acid, (1 part concentrated acid to 3 of water) or permanganate of potash, (½ lb. to 1 gallon of water) or by asphaltum in turpentine; *black* by repeated application of a decoction of equal parts of Brazilwood chips, powdered gallnuts and alum; *cherry* by anatto (4 oz. in 3 qts. water) with sufficient potash to give the desired tint; *purple* by a decoction of logwood chips in about three times their weight of water, pearlash and indigo; *blue* by copper

filings dissolved in nitric acid (1 part filings in 6 to 8 parts commercial acid), followed by solution of pearlash (2 ozs. in 1 pint of water); *green* by a mixture of verdigris and vinegar, 1 part verdigris, 8 of water, 9 of vinegar and about ½ part of sap green.

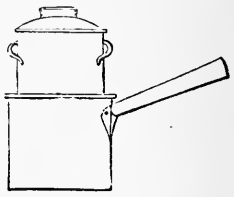
Small articles in wood may be colored with the coal-tar colors (see DYES) by dipping them first in a mixture of 1 part olive oil, 1 part calcined soda, and 12 parts boiling water. They will then take a stain from a water solution of any of the coal-tar colors.

STARCH.—Commercially there are two classes of starch, those used as food and those for the laundry. For the former, *see* ARROWROOT, SAGO, and TAPIOCA. Laundry starch is usually made of wheat or rice. *Poland starch* is considered superior to the American or English. There is a *potato-starch*, which, though inferior to these, has the advantage that it can be easily made at home. Wash good mealy potatoes, grate them in a pan or tub of clean water and stir well. Soon the thickest part will subside to the bottom; then pour off all the white water into another vessel, keeping back all the pulp. Add more water to the pulp, stir again, and pour the whitened water off as before. Repeat this process as long as the water comes off whitish. Let the whitened water that was poured off remain undisturbed for some time, and the white part will settle to the bottom, leaving the water quite clear; this subsided matter is the starch. Pour off the water and dry the starch in the sun; it will generally weigh one-fifth of the best potatoes.

To make good flour-starch, mix flour gradually with cold water, so that it may be free from lumps. Stir in cold water till it will pour easily; then stir it into a pot of boiling water, and let it boil five or six minutes, stirring it frequently. A tallow or spermaceti candle, stirred round in the starch several times, will make it smoother —strain it through a thick cloth. Starch made in this manner will answer for both cotton and linen very well. Some people do not boil their starch, but merely turn boiling water on the mixed flour and water, but it does not make clothes look nice. When rice is boiled in a pot without being tied up in a bag, the water in which it is boiled is as good as Poland starch for clear-starching muslins, if boiled to a thick consistency after it is turned off from the boiled rice, and then strained. Muslins to look clear, should be starched and clapped dry, while the starch is hot, then folded in a very damp cloth, and suffered to remain in it till they become quite damp, before ironing them. If muslins are sprinkled they are apt to look spotted. Garments that are not worn, when laid by, should not be starched, as it rots them when not exposed to the air.

STEAM COOKER. (*See* COOKER.)

STEAMING.—The application of steam to culinary purposes is becoming general in kitchens at the present day, especially in those of large establishments, many of which are furnished with apparatus for its use, so admirably constructed and so complete, that the process may be conducted on an extensive scale with very slight trouble to the cook; and with the further advantage of being *at a distance from the fire*, the steam being conveyed by pipes to the vessels intended to receive it. Fish, butchers' meat, poultry, vegetables, puddings, maccaroni, and rice, are all subjected to its action, instead of being immersed in water, as in simple boiling; and the result is to many persons perfectly satisfactory; though, as there is a difference in opinion amongst first-rate cooks with regard to the comparative merits of the two modes of dressing *meat* and *fish*, a trial should be given to the steaming on a small scale before any great expenses are incurred for it, which may be done easily enough with a common saucepan or boiler, fitted like the one shown here with a simple tin steamer. Servants not accustomed to the use of these, should be warned against boiling in the vessel itself any thing of coarse or strong flavor, when the article steamed is of a delicate nature. The vapor from soup containing onions, for example, would have a very bad effect on a sweet pudding, and on many other dishes. Care and discretion, therefore, must be exercised on this point. The quite inexperienced cook may require to be told that any article of food which is to be cooked by steam in a saucepan of the form exhibited in the engraving must be prepared exactly as for boiling and laid into the sort of strainer affixed to the top of the sauce-pan; and that water, or some other kind of liquid, must be put into the saucepan itself, and kept boiling in it, the lid being first closely fixed into the steamer.



Saucepan with Steamer.

STEARINE.—A white, crystalline, neutral fat, existing in most oils and fats. It forms the largest constituent of mutton tallow, from which it may be separated by heating that substance with ten times its volume of ether; and this is the chief source from which the stearine of commerce is derived. The well-known *Stearine candles* are among the best.

STEWING.—Stewing differs from boiling (*See* BOILING) only in this, that the heat is never raised to the boiling point, but only to a very gentle simmering, with a very small quantity of water. Of course, it requires a much longer time to cook in this manner; but in stewing, the texture of the meat is rendered more tender, the gelatinous parts are more completely dissolved, and instead of a considerable part going into the water, as in boiling, the whole of the juices are preserved in the stew, which is therefore very nutritious. Stewing is therefore one of the best modes of cooking; and it is also one of the most economical, for a very small quantity of fuel, properly applied, is sufficient to keep up the required simmering for a great

length of time. The constant practice of stewing is one of the secrets of the perfection of French cookery.

The enamelled or porcelain-lined stew-pans are much superior to the old-fashioned metal ones for most purposes. They should always be filled with water immediately after being used, and will then merely require to be well washed and rinsed with more boiling water; but when they have been neglected, strong soda and water should be boiled in them for a few minutes.

STIFF-NECK. (*See* NECK.)

STIMULANTS.—In medicine, stimulants are either general or local—that is to say, they either act on the whole system, or on individual parts. Thus, alcohol and ammonia act on the whole system, while mercury stimulates the glands and absorbents. This class of medicines is, however, scarcely fit for domestic use.

(*a*) Sesquicarbonate of ammonia, 5 to 8 grains; compound tincture of lavender, 20 minims; sulphuric ether, 30 minims, camphor-mixture, 1 ounce. Mix. (A stimulating draught in case of faintness.)

STINGS.—These are not often very serious, though of common occurrence. From mosquito-bites to the stings of bees and hornets, the best remedies are Cologne-water, spirits of hartshorn (ammonia), and tincture of camphor. Sometimes the insect's sting is broken off in the wound, and it is therefore well to look for this; it is known by the black dot in the centre of the poisoned spot. This can be seized by delicate forceps and pulled out, and the doing of this affords immediate relief. If it remain, there is no danger, as is commonly supposed; the worst result is an increase of the soreness, and a formation of matter by which its discharge is after some time effected.

STINKS. (*See* DEODORIZERS.)

STOCK—The water in which meat has been boiled as directed for soups; it forms the basis of all soups and gravies. Stock made from fresh meat, is made exactly like soup, omitting the thickening and seasonings; but by saving the bones from roasts, etc., and using them as follows, a constant supply of it can be kept on hand at a very small cost:—Put whatever bones are at hand in a pot, cover them with cold water, and boil them slowly three or four hours; then pour off the liquor into another pot, and add to each gallon the meat off a knuckle of veal, a pound of lean beef, and a pound of lean bacon, all sliced, with two or three scraped carrots, two onions, two turnips, and two quarts of water; stew till the meat is quite tender, but do not let it burn. Stock thus prepared will serve either for soup or for brown or white gravy. (*See* SOUP.)

Large Stockpot.

STOCKFISH. (*See* HAKE.)

STOCKINGS, Silk, To Wash.—To wash *white* silk stockings, make a lather of white soap and warm soft water; stretch the stockings on a table, and with a roll of rough coarse cloth, dipped in the lather, rub them hard, first on one side, then on the other. Repeat the process with three lathers. Then dip them in three waters to rinse them, and when quite clean hang them up, without rinsing, the wrong side outward. When half dry take them down, stretch and pin them, the right side out, on a cloth. Do not iron them, but rub them till smooth with a small roll of clean flannel.

To wash *black* silk stockings, cut some white soap into thin bits and boil it in soft water till thoroughly dissolved; then mix a little of it in cold water, adding a teaspoonful of gall. Having turned the stockings wrong side outward, and rubbed some of the boiled soap on the dirtiest places, wash them well through the lukewarm suds; repeat the washing in fresh suds and water, till they are quite clean; then rinse them through two cold waters, adding to the last a little blue from the blue-bag; then squeeze them well, stretch them evenly, and hang them out immediately. While still damp, turn them right side out, stretch, and pin them on an ironing blanket, and with the end of a bit of rolled-up flannel, on a smooth stone, rub them hard and quick one way, till they are quite dry, and look smooth and glossy. This is better than to iron them, which always gives silk stockings an old appearance.

STOMACH-PUMP.—This is an apparatus by means of which, in cases of poisoning, fluids can be introduced artificially into the stomach, or be withdrawn from this organ. It consists in a small pumping apparatus, to which is attached a long elastic tube of sufficient length to be passed down the gullet into the stomach. This tube, at the point where it passes into the mouth, is usually guarded from the action of the patient's teeth by a perforated gag of wood. The stomach-pump, though not used so frequently and indiscriminately as in former days, is, however, an invaluable and indispensable aid in the treatment of cases of poisoning by opium and other narcotics, and of extreme drunkenness caused by poisonous quantities of spirits. It may be laid down as a general rule, that the stomach-pump ought always to be used when the patient, under the influence of a narcotic or alcoholic poison, is too much exhausted or too insensible to swallow emetics or antidotes, or where, as in cases of attempted suicide, he obstinately refuses to swallow. One or two pints of lukewarm water should first be pumped into the stomach, and then be withdrawn with part of the contents of the stomach and of the poison. This process should be repeated until the injected water, when pumped back again, is found to be clear and colorless. Very often, however, the simple introduction of the stomach-pump, or the presence of a small quantity of warm water, will cause vomiting; but in cases of intense narcotic poisoning, the stomach is generally insensible to the presence of the tube, and requires to be well washed

out. When, in cases of poisoning, the patient is able or willing to swallow, and vomiting can be produced by the frequent administration of warm drinks, the stomach-pump ought not to be used. This instrument is not always a harmless one, and when used by inexperienced hands, and in circumstances exciting haste and confusion, may do considerable mischief. The mucous membrane of the throat, gullet, or stomach, may be wounded by the violent introduction of the tube, and some bleeding from the raw surfaces may be produced. A more serious accident is the introduction of the tube into the air-passages instead of the gullet and stomach. A case has been recorded in which after death from sulphuric acid poisoning treated by the stomach-pump, the windpipe, bronchi, and large portions of the spongy tissue of the lungs were found choked and plugged with chalk mixture, which it had been intended to introduce into the stomach. Another danger attending the use of the stomach-pump is laceration of the mucous membrane of the stomach, strips of which are drawn into the orifices of the tube as the fluid contents of the stomach are being withdrawn. This occurs only in cases where the inner coat of the stomach has been softened by some corrosive agent, and on this account it has been laid down as a rule that the stomach-pump ought not, except under special circumstances, to be used in cases of poisoning by the mineral acids.

STOVES. (*See* WARMING.)

STRAINERS.—These are made of cloths, of metal, of earthenware pierced with holes, or of wire-cloth. The cloth strainers are best, and those made of metal should not be used at all.

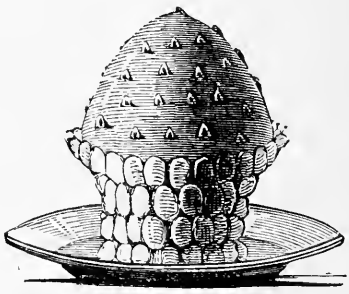
STRAMONIUM.—By this term is commonly implied the leaves of the *Datura Stramonium* or Thorn Apple, but the seeds of the same plant are also now used to a considerable extent. The leaves are large and much indented at the edges, with a peculiarly rank and disagreeable odor. These should be gathered when the plant is flowering. The seeds are very small, kidney-shaped, and rough on the surface, and have a peculiar taste. All parts of the plant contain an alkaloid identical with that contained in belladonna, but called datura instead of atrophia. This may be obtained in white crystals, which yield a peculiar odor on being moistened by sulphuric acid. The preparations are made from the seeds only, and are an extract and tincture. The leaves are mainly used for smoking.

The properties of stramonium are much like those of belladonna, as might be expected from their similarity of composition. Nevertheless, stramonium, more perhaps from habit than anything else, is most frequently given for maladies which are not usually treated by belladonna. Stramonium is, in point of fact, prescribed almost entirely for spasmodic lung affections, especially asthma. For this malady, whether merely spasmodic or partly dependent on disease of the organ itself, stramonium is usually prescribed in the form of tincture, or the leaves are given for smoking. These generally do well, and procure relief for a time at all events. Dose, 20 minims of the tincture three or four times a day.

Stramonium is sometimes given with the intention of relieving pain. An ointment may be made of the leaves and spread over a painful part, but this plan is not often adopted. For smoking, twenty grains of the dried leaf may be made into a cigarette and smoked, taking care to inhale the smoke. This at first gives rise to cough, but by-and-by profuse expectoration follows, and then comes relief. Some mix stramonium with tobacco, but the smoke of this is more irritating, and cannot well be inhaled. In some cases stramonium fails altogether, and in all the dose must be increased. The *Datura tatula* has been used for smoking like the *Datura Stramonium*.

STRANGULATION. (*See* CHOKING.)

STRAWBERRY.—The strawberry belongs only to temperate and rather cold climates, and no fruit of these latitudes that ripens without the aid of artificial heat is comparable to it in point of flavor. It has also a delicious fragrance, it is sub-acid and cooling, and has the peculiar advantage of not creating acidity when taken into the stomach. It is nutritious and very wholesome, and may be safely eaten where other fruit is forbidden; physicians indeed rank strawberries among their pleasant remedies, particularly in cases of fever. There are many varieties of the strawberry; among the earliest and best being the *early scarlet*, *Hovey seedlings*, *McAvoy's superior*, *Burr's pines*, *Scotch runners*, *Black Prince*, *Boston pines*, *etc.* The first strawberries make their appearance from the South about the 1st of April, when they fetch very high prices; in May they are more abundant, and by the 1st of June are generally quite plentiful, continuing so till the 25th of June, when the supply begins to fail. By the middle of July they have generally disappeared entirely. Besides being used for dessert, strawberries are preserved in several ways. (*See* COMPOTES, ICE-CREAM, ICES, JAM, JELLY, MARMALADE, PIES, PRESERVES, PUDDINGS, and TARTS.)



Chantilly Basket.

Chantilly Basket.—This is a very ornamental dish. Take a mould of any sort that will

serve to form a basket on, just dip the edge of some macaroons into melted barley sugar, and fasten them together with it; take it out of the mould, keep it in a dry place until wanted, then fill it high with whipped strawberry cream which has been drained on a sieve from the preceding day, and stick very fine ripe strawberries over it. It should not be filled until just before it is served.

STRYCHNINE. — Poison. — *Symptoms:* Shortness of breath, rigidity of muscles of neck and back, spasms of the extremities. *Treatment.* (*See* Nux Vomica.) In proper doses it is a valuable tonic, especially in nervous exhaustion. It is also very useful in paralysis, particularly when the parts begin to improve. The dose is about the $\frac{1}{24}$th part of a grain. It is a deadly poison, however, and should never be taken except under medical advice.

STUARTIA.—The *Stuartia Pentagynia* is one of the most desirable of the hardy shrubs. It grows wild in the mountains of the Middle and Southern States, but has been reduced to cultivation by Messrs. Parson within the past few years, and should find a place in every garden, however small. The plant itself is graceful, the foliage is very pretty, and it is covered in August with a profusion of large camellia-like flowers, white, with purple centre. Plant it in the spring in any good soil, where the sun is not too powerful.

STUCCO.—A term frequently applied to various kinds of lime or cement coatings laid in masonry in imitation of stone. Speaking more strictly, it means a species of plastering worked up by hand to a face adapted to receive paint. The common stucco is nothing more than plastering which has received an additional amount of manipulation. Marble stucco is made with fine lime mixed with calcareous powder and chalk in such proportions and worked in such a way as to produce a hard uniform surface which admits of being colored, painted, and polished, so as to resemble various colored marbles. Owing to the great variations of temperature—the extreme cold of winter and the heat of summer—in this country, stucco should never be applied to the outside walls of a house of any pretensions. It will begin to crack and peel off within two years.

STUDENT LAMP. (*See* German Student Lamp.)

STUFFINGS.–In making stuffings and force-meats, the special tastes of those who are to eat them must be consulted in the matter of seasoning, and no exact rules can be given on this point. No one flavor should predominate greatly; and if several dishes with force-meat are served at the same meal there should be a marked difference in their taste. Force-meat should be consistent enough to cut with a knife, but not dry or heavy. The ordinary stuffing for turkeys, chickens, veal, etc., is made of bread-crumbs, mixed with butter, pepper, salt, thyme, or sweet marjoram, and wet with hot water or milk. The yolk of an egg or two may be added if desired; and besides thyme and sweet marjoram, parsley and sweet basil may be used for seasoning.

Bread-crumb Stuffing.— Crumble bread quite fine—do not grate it—and to a pint, allow an ounce of butter, an even teaspoonful of salt, half a teaspoonful of pepper, and the same of celery seed; stir the whole in a frying-pan until thoroughly heated, when it is ready for use. Fresh celery, chopped, may be used instead of the seed, or chopped parsley instead of either; also parboiled oysters, or chopped ham. This is excellent for all boiled fowls. For roast fowls use summer savory, or any of the sweet herbs in addition to the pepper and salt. Use grated onion if liked. The bread is sometimes soaked, but it makes a sodden mass which can hardly be preferred to the light dry stuffing which rolls out in the carving, and moistens itself in the gravy. In stuffing for veal, omit the salt and add a gill of pork chopped fine. Geese are often stuffed with mashed potatoes seasoned with butter, pepper, salt, and sweet marjoram.

Chestnut Stuffing.—Roast chestnuts and skin them, removing also the white envelope beneath the outside skin; fill the inside of the chicken or turkey till half full, add one or two ounces of butter, and finish the filling.

Egg Balls.—Beat three hard yolks of eggs in a mortar, and make into a smooth paste with the yolk of a raw one; roll it into small balls, and throw them into boiling water two minutes to harden.

Force-meat Balls.—Mix a pound of fresh suet (for a garnish or for soup), take: veal, 12 oz; salt pork, 3 oz; grated bread, 2 oz; salt 1 even teaspoonful; pepper and summer savory, ½ teaspoonful each; sweet cream, 3 tablespoonfuls; egg (beaten with the cream), 1.

Chop the meat fine as possible, mix with the other ingredients and make into smooth balls, a little larger than a marble; roll in beaten egg, then in bread that has been grated and sifted; place them on a frying basket and sink it in deep hot lard, first testing the heat with a bit of bread. They will brown at once; then reduce the heat and let them remain two or three minutes that the veal may be well cooked. If intended for soup, lay a dozen balls in the tureen. They may be made of any cold meat, and seasoned to the taste.

Lobster Force-meat.—Take the flesh and soft parts of a middling sized lobster, half an anchovy, a large piece of boiled celery, the yolk of a hard-boiled egg, a little cayenne, mace, salt, and white pepper, with two tablespoonfuls of bread-crumbs, and one of oyster liquor, two ounces of butter warmed, and two eggs; beat well together in a mortar, make into balls, and fry to a fine brown in butter. This is excellent for fish, soups, or stews.

Onion and Sage Stuffing.—Boil three large onions from ten to fifteen minutes, press the water from them, chop them small, and mix them with an equal quantity of bread-crumbs, a heaped tablespoonful of minced sage, an ounce of butter, a saltspoonful of salt, and

half as much pepper. This is a very popular stuffing for geese, ducks, pork, etc. Part of the liver of the goose or duck boiled two or three minutes and sliced fine is sometimes added to these, and the whole is then bound together with yolk of egg; but they are not necessary. The onions can be used raw when their strong flavor is not objected to; but the odor of the whole dish will then be somewhat overpowering.

Oyster Stuffing.—Prepare a stuffing of four ounces bread-crumbs, mixed with two ounces of butter, and seasoned with salt, pepper, and thyme or sweet marjoram; mince a dozen oysters and stir into it; and, if you are partial to the taste, wet the bread-crumbs with the oyster-liquor. This is an excellent stuffing for turkeys.

Sausage Stuffing.—Prepare as directed for Oyster Stuffing, adding from four to six ounces of sausage-meat instead of the oysters.

Or, set a saucepan on the fire with half an ounce of butter in it, and when the butter has melted add an onion chopped fine, and fry nearly brown; then add the heart and liver of the chicken or turkey, chopped fine, and from six to eight ounces of sausage-meat (according to the size of the bird); stir for about twelve minutes, take from the fire, mix the yolk of an egg in it, and set back on the fire for five minutes, stirring all the while.

Suet Force-meat.—Mix well together six ounces of fine stale crumbs, with an equal weight of beef-kidney suet, chopped extremely small, a large dessertspoonful of parsley, mixed with a little lemon-thyme, a teaspoonful of salt, a quarter one of cayenne, and a saltspoonful or rather more of mace and nutmeg together; work these with three unbeaten egg-yolks, and three teaspoonfuls of milk; then put the force-meat into a large mortar, and pound it perfectly smooth. Take it out, and let it remain in a cool place for half an hour at least before it is used; then roll it into balls, if it be wanted to serve in that form; flour and fry them gently from seven to eight minutes, and dry them well before they are dished.

The finely grated rind of half a lemon would improve this force-meat for many.

STURGEON.—A very large fish which is taken in great abundance in American waters, and sold in the markets cut up like halibut. It is not a delicate fish in flavor, but it is wholesome, and, when properly prepared, far from unpalatable. The young fat fish are considered best; their flesh has a light red or "beefy" appearance, and the fat is of a pale yellow color. The Sturgeon is in season from the middle of April to the 1st of September.

Baked Sturgeon.—Remove the skin and soak the fish in salt and water for half an hour; then parboil it to take out the oil of which there is generally too much. Make a force-meat of bread-crumbs, salt pork chopped very fine, butter, and sweet herbs; cut deep gashes in the upper part of the fish, and rub this force-meat well in. Put into a baking-pan, add a little water, and bake in a moderate oven for an hour.

Roast Sturgeon.—Soak the fish in salted water for an hour, then wipe dry, and roast before a hot fire, basting frequently with butter. Serve with some piquant sauce.

Steak (Sturgeon).—Skin carefully, soak in salted water for an hour, wipe dry, sprinkle with salt, and broil on a gridiron over hot coals; when done, spread butter liberally over it, dust with pepper, and serve hot. Sliced lemon may be sent round with it.

STYE.—This is an inflammation on the edge of the eyelid, resulting in the formation of matter which must be let out. For two or three days it is very painful and red. Bathing with hot water is the best thing, and when a yellowish spot is seen, then the matter is pointing, and on being pricked with a needle or knife-point, the pus exudes and gives relief at once. Rubbing the spot with a smooth gold ring when the preliminary itching and tenderness are first felt is believed to act as a preventative. Sometimes a succession of styes follow each other, one scarcely yielding, before another appears; this indicates a bad state of the blood, and local treatment will be of little use.

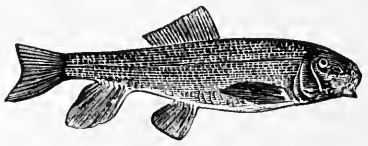
STYPTICS.—Substances applied to a part to arrest bleeding. Most of these are astringents, and seem to act by causing the minute blood-vessels to shrink, and so prevent further hemorrhage. Cold is the best and simplest styptic, especially if applied as ice; that will arrest most bleedings. Astringent substances, like galls in powder, catechu, matico in powder, and alum, may all be employed. The perchloride and persulphate of iron, are also powerful styptics. (*See* BLEEDING.)

SUCCORY. (*See* CHICORY.)

SUCCOTASH.—This is usually made of green corn and Lima, string or butter beans.

Take boiled corn on the cob; score every row of grains lengthwise; cut off the outer edge and with the back of the blade push out the heart and cream; allow two thirds of corn to one of beans; put them in a stew-pan, cover with boiling water, when tender let the remaining water boil away; add a gill of rich milk, a liberal lump of butter; pepper and salt to taste and let it simmer for fifteen minutes. If not thick as liked, add a teaspoonful of corn starch.

SUCKER.—A fair pan fish, with a somewhat earthy taste. The *large-scaled* or *blue sucker* is a smaller fish than the common sucker, of a pale blue color, and not so good for the table. The



horned sucker has little horns between the eyes and nose; it is good but not delicate eating. All are in season from October to April, but are sel-

dom very abundant. Boil or fry as directed for fresh MACKEREL.

SUCKING-PIG. (*See* PIG.)

SUDORIFICS.—Remedies which cause and promote perspiration. They are also called diaphoretics. (*See* DIAPHORETICS.)

SUET.—The fat which invests the kidneys of oxen or sheep; that of the former is called *beef-suet*, and that of the latter is called *mutton-suet*. The internal fat of all ruminating animals is harder than that of others, and is slightly brittle; when melted and separated from the membranes in which it is contained, it constitutes *tallow*. Good suet should be of a brighter shade than the meat or muscle fat, dry and hard, should break or crumble easily, and should show but little fibre through it. Besides being employed instead of butter or lard for greasing gridirons, frying-pans, etc., suet is used in many ways. (*See* DUMPLINGS, PIES, PUDDINGS, and STUFFINGS.)

SUGAR.—There are two kinds of sugar which are chemically different, and are known as *cane-sugar* and *grape-sugar*, the former being obtained from the sugar-cane, the maple-tree, the root of the beet, the mallow, and some other forest trees and cultivated plants; while the latter is contained in varying quantities in those fruits which are more or less sweet, especially in the grape, fig, and plum. There are several other peculiar varieties of sugar, but the only one which requires mention is *milk-sugar*, which is found in the milk of animals, and which may be obtained by evaporating whey to a syrup, and purifying the sugar, which crystallizes in the form of a four-sided prism, and is very hard, white, and transparent. By far the larger part of the sugar consumed in this country is the produce of the sugar-cane, some of it being imported from the West Indies, while a considerable portion of the whole is made in the Southern States.

The impurities of cane-sugar consist of fragments of the cane, vegetable albumen, blood (from the material used in fining it), an animalcule peculiar to it, woody fibre, and starch; besides which may be enumerated lime, lead, iron, sand, and salt, all of which are found in the raw sugar, and but seldom in the refined sugars, unless these contain a portion of the molasses still adhering to their crystals. Some of the impurities are owing to the ordinary processes of manufacture, and are unintentional, while others are due to those wilful adulterations called in the trade "handling." This term is ostensibly applied to the mere mixing of different qualities of sugar together; but too often it is simply a cover for the introduction of other substances. These adulterations have been shown to occur to a very great extent in the raw sugars sold in our shops; but as they are scarcely practised at all in white or lump sugar, the public can avoid them by purchasing the latter article only. Loaf or refined sugar, when good, is of a close texture, of a fine white gloss, and is simply sweet to the taste, without other flavor; when inferior, it is coarse, with looser grain, crumbles easily, and is a little yellowish in color, and its sweetness has something of the taste of moist sugar. Moist or raw sugar, when good and unadulterated, is bright and composed of crystallized grains. A dull-looking moist sugar is always one of an inferior or doubtful quality.

Loaf sugar should be stored in the papers on a shelf. The others should be kept in closely-covered kegs or covered wooden receptacles made for the purpose. It is not well to buy large quantities at a time.

SUGAR-BEER. (*See* BEVERAGES.)

SUGAR-CANDY. (*See* CANDY.)

SUGAR-CANE.—A species of large, jointed reed or grass, of which there are several varieties, all of them being natives of tropical and sub-tropical countries. The common sugar-cane is a perennial, with a creeping root, sending up a number of stems from eight to twelve feet high, which have many joints, are of various colors, and from one to two inches thick. They are filled for about two-thirds of their length with a loose, sweet, juicy pith. The leaves are ribbon-shaped, and four or five feet long, with a strong whitish middle nerve. The violet-colored sugar-cane is much esteemed and widely cultivated in the West Indies and in the Southern States. The sugar-cane is usually propagated by cuttings, the top joints being used for this purpose. The cuttings are planted in rows three or four feet apart, and at intervals of about two feet in the rows. The largest varieties, in rich moist soils, attain a height of twenty feet; but in poor dry soils the height is sometimes no more than six feet. The best varieties are ready for cutting in about ten months from the time of planting, but other varieties are unfit for use until they have had from twelve to twenty months' growth. Fresh stems, called *rattoons*, spring from the root, after the old stalks are cut off, so that the plantation does not require to be renewed for several years; but the cane of the first crop is largest, and a gradual decrease of size takes place. The *Chinese Sugar-cane* or *Sorgho-grass* was introduced into the United States in 1856, where its cultivation has extended as far North as Maine. (*See* SORGHUM.)

SULPHUR.—Sulphur is employed in medicine in two forms—sublimed sulphur and precipitated sulphur or milk of sulphur. Sublimed sulphur is commonly used; it is a bright yellow powder without taste or smell. It burns with a blue flame, and produces the unpleasant fumes of sulphurous acid. The precipitated sulphur is pale yellow, and its powder is much finer. The preparations of sulphur are a *confection* and an *ointment*. The confection contains sulphur, cream of tartar, and syrup of orange-peel; it is a valuable laxative in piles, or where it is not desired to do more than gently open the bowels. It is mainly, however, as an external application that sulphur is employed. Sulphur ointment still remains the great remedy for the itch, and it is useful in other forms of skin disease. (*See* ITCH.)

SULPHURIC ACID. — Poison. *Symptoms:* Great distress of the stomach. *Treatment:* Give a tablespoonful or two of pulverized chalk or magnesia, with a little water. If neither is at hand, lime, or even plaster knocked from the wall and ground up.

It is known as oil of vitriol; intensely acid, and chars any vegetable substance added to it. Commercial oil of vitriol often contains arsenic, from the use of impure sulphur. The diluted acid is used in two forms—aromatic sulphuric acid, which is flavored by cinnamon and ginger; and dilute sulphuric acid, in which water alone has been added. The strong sulphuric acid is rarely employed, even as a caustic; it is unmanageable, and less powerful reagents are preferred. Internally, the aromatic or dilute sulphuric acid is mainly used as an astringent. In this way it is of much service in the wasting sweats of consumption; and it may be of service where there is a chronic mucous discharge from the bowels. It is also of importance as an astringent in diarrhœa. The ordinary dose of dilute or aromatic sulphuric acid is about 10 or 15 drops, well diluted with water, 3 or 4 times a day. In diarrhœa, that quantity ought to be given with as much laudanum, if irritating substances have been expelled.

SULPHUROUS ACID.—A remedy of some importance. It may be prepared in a variety of ways, but it is most commonly obtained by reducing sulphuric acids by means of charcoal. It is most easily prepared by burning sulphur in the open air. It has the well-known odor of burning sulphur. Sulphurous acid is a powerful deoxidizing reagent, and is powerfully destructive of vegetable life. Applied to the skin, it causes some reddening; and if any vegetable parasite is present, as is not unfrequently the case in skin disease, it is destroyed. Hence arises its value in such maladies. Internally, if there is any tendency to fermentation, and if fungi are present in the stomach, it does great good. Used as spray in certain forms of sore throat, sulphurous acid is also of great use. It may be used, diluted as a gargle. Sulphites and hydrosulphites, especially of soda, are frequently given internally in its stead. (*See* Soda.)

SUMACH (POISON) *See* Poison Plants

SUN-STROKE.—This is a sudden prostration due to long exposure to great heat, especially when one is fatigued or exhausted. It commonly results from undue exposure to the sun's rays in summer, but it may be caused by exposure to too great heat under any circumstances. It begins with pain in the head or dizziness, quickly followed by loss of consciousness and complete prostration. Sometimes, however, the attack is as sudden as a stroke of apoplexy. As the symptoms advance, there is flushing of the face with increased action of the heart and labored breathing, and then coma, upon which in a few hours death will supervene. Slighter symptoms may occur, and either pass away under judicious treatment, or slowly merge into the severer form.

Treatment.—The immediate aim should be to reduce the excessive heat. Take the patient at once to a cool and shady place, *but don't carry him far to a house or hospital.* Loosen the clothes well about his neck and waist, and lay him down with the head a little raised. If the attack seems slight, apply wet cloths to the head, renewing them frequently, and mustard or turpentine to the calves of the leg and the soles of the feet. If the prostration is great, dash pails of cold water on his head and chest, or put him under a pump and pump water freely on him. If he can swallow, some stimulant should be given; aromatic spirit is best, but some weak brandy or whiskey and water will answer. The patient too must be kept perfectly quiet. Exertion of any kind may cause the heart to stop, and thus result in death. Bleeding is often resorted to in cases of sun-stroke, but the advantage of this is doubtful, and no one but a physician should venture upon it. During convalescence the patient must avoid fatigue or exposure to heat, and must have a nutritious and stimulating diet.

SUPPER AND TEA.—In the large cities where late dinners are the rule, tea is an obsolete meal, lunch in the middle of the day having taken its place. Some, it is true, have adopted the continental practice of eating late suppers; but the practice is unquestionably a bad one, except for those who sit up very late or who work hard at night. A dinner requires at least four hours to digest, even in a perfectly healthy stomach, and the digestive organs afterwards require a period of rest. To take in more food while the process of digestion is in full operation cannot but be injurious, and the consequences, in the shape of dyspepsia and sleeplessness, are not slow in manifesting themselves. When dinner is taken at mid-day, the tea may consist of any of the dishes suggested for breakfast and lunch. (*See* Breakfast and Lunch.) For late suppers, the lighter the food the better. Fresh fish, sardines, well-ripened fruit, a cream, light pudding, blanc-mange, a little iced fruit, fruit-jelly, prunes, etc., are appropriate. Strong tea or coffee should not be drunk; nor wine, unless it be a very light one.

SWAN.—There are two varieties of this bird which are found in our markets. The *trumpeter swan* is most abundant; they are generally shot near the Chesapeake Bay. The young are pretty good eating, but the old are very dry and tough. The *wild* or *whistling swan* is only occasionally to be had. The cygnets (young) are very fine eating, but they should not be more than a year or two old. They require five or six years to reach maturity. The third year the bill becomes black. Very old birds have a hard protuberance on the bend of the last joint of the wing. Both varieties are in season from November to January. Prepare, cook, and serve as directed for wild Duck.

SWANSDOWN.—Properly speaking swansdown is the fine, soft, downy feathers of the swan, used for various articles of ladies' dress, trimmings, etc. The term is commonly applied

to a sort of twilled fustian, made of wool with a small quantity of silk, and used for gentlemens' waistcoats. An inferior kind has cotton instead of silk.

SWEETBREADS. — These are rightly esteemed one of the greatest delicacies of the meat kind. There are but two in a calf, one from the neck or throat, called "throat sweetbread," the other from near the heart, known as the "heart sweet bread." The largest are the best, and the heart sweet-bread the most delicate. Their color should be clear, and a shade darker than the fat of the same animal.

In whatever way sweet breads are dressed, they should first be well soaked in lukewarm water, then thrown into boiling water to *blanch* them, as it is called, and to render them firm. If lifted out after they have boiled from five to six minutes, according to their size, and laid immediately into fresh water to cool, their color will be better preserved.

Broiled Sweetbreads. — Parboil them as above, spread plenty of butter over them, and broil on a gridiron over hot coals, turning often.

Fricasseed Sweetbreads. — Cut up the remnant of a cooked sweetbread in small pieces, and prepare a good sauce or gravy as for stewing; lay the sweet breads in the pan with the gravy, and boil up once. Garnish with slices of lemon, or pieces of fried bread.

Fried Sweetbreads.—Parboil five minutes, wipe them dry, and lard with narrow strips of salt fat pork, using a larding-needle; put a very little butter or lard into a frying-pan, lay in the sweetbreads, when it is hot, and fry to a light crisp brown, turning often.

Roast Sweetbreads.—Parboil large ones, and when cold lard them with salt pork as for frying; roast them brown in a moderate oven, basting often with butter and water. For sauce, plain butter and mushroom catsup.

Stewed Sweetbreads.—Parboil and lay in cold water as directed above; then put them into a sauce pan, add a very little water, and stew them until quite tender; then add for each sweetbread a teaspoonful of butter, and a little cream; season with pepper and salt and a little chopped parsley; let them simmer in this for five minutes, dish them, and pour the gravy over them. The sweetbreads may be larded as for frying, if liked very rich, but they are more delicate without.

SWEET BRIER. (*See* EGLANTINE.)

SWEET HERBS. (*See* HERBS.)

SWEET MARJORAM. (*See* MARJORAM.)

SWEET POTATO. (*See* POTATO.)

SWIMMING, Hints On.—Every person male or female, should learn to swim; and as the art can be acquired much easier in early life, parents should encourage their children to learn, and every school should have a swimming bath attached. In France all soldiers are taught to swim as a part of their drill exercise. As Dr. Franklin's hints on swimming are generally conceded to be unsurpassed in practical usefulness, we will quote them in preference to any of the newer and more technical "guides;" for this fact is both true and important: success in swimming at the start depends much more on the state of mind of the beginner than on any fancied knowledge of the technique of the art. Dr. Franklin says:

"The only obstacle to improvement in this necessary and life-preserving art is fear; and it is only by overcoming this timidity, that you can expect to become a perfect master of swimming It is a very common thing for novices in the art of swimming to make use of corks or bladders to assist in keeping the body above water; some have utterly condemned the use of these; however, they may be of service in supporting the body while one is learning what is called the stroke, or that manner of drawing in and striking out the hands and feet that is necessary to produce progressive motion. But you will be no swimmer till you can place confidence in the power of the water to support you; I would therefore advise the acquiring that confidence in the first place; especially as I have known several who, by a little practice necessary for that purpose, have insensibly acquired the stroke, taught as if it were by Nature. The practice I mean is this: choosing a place where the water deepens gradually, walk coolly into it till it is up to your breast, then turn round your face to the shore, and throw an egg into the water between you and the shore; it will sink to the bottom, and be easily seen there if the water be clean. It must lie in the water so deep that you cannot reach to take it up but by diving for it. To encourage yourself in order to do this, reflect that your progress will be from deep to shallow water, and that at any time you may, by bringing your legs under you, and standing on the bottom, raise your head far above the water; then plunge under it with your eyes open, which must be kept open before going under, as you cannot open the eyelids for the weight of water above you, throwing yourself towards the egg, and endeavoring by the action of your hands and feet against the water, to get forward till within reach of it. In this attempt you will find that the water buoys you up against your inclination; that it is not so easy to sink as you may imagine, and that you cannot but by active force get down to the egg. Thus you feel the power of water to support you and learn to confide in that power, while your endeavors to overcome it and reach the egg, teach you the manner of acting on the water with your feet and hands, which action is afterwards used in swimming, to support your head higher above the water, or to go forward through it.

"I would the more earnestly press you to the trial of this method, because, though I think I shall satisfy you that your body is lighter than water, and that you might float in it a long time with your mouth free for breathing, if you would put yourself into a proper posture, and would be still, and forbear struggling; yet, till you have obtained this experimental confidence in the water, I cannot depend upon your having the necessary presence of mind to

recollect the posture, and the directions I gave you relating to it. The surprise may put all out of your mind.

"Though the legs, arms, and head of the human body, being solid parts, are specifically somewhat heavier than fresh water, yet the trunk, particularly the upper part, from its hollowness, is so much lighter than water, as that the whole of the body, taken altogether, is too light to sink wholly under water, but some part will remain above, until the lungs become filled with water, which happens from drawing water to them instead of air when a person in the fright attempts breathing while the mouth and nostrils are under water.

"The legs and arms are specifically lighter than salt water, and will be supported by it, so that a human body cannot sink in salt water, though the lungs were filled as above, but from the greater specific gravity of the head. Therefore, a person throwing himself on his back in salt water, and extending his arms, may easily lie so as to keep his mouth and nostrils free for breathing; and, by a small motion of his hand, may prevent turning should he perceive any tendency to it.

"In fresh water, if a man throw himself on his back, near the surface, he cannot long continue in that situation but by proper action of his hands upon the water; If he use no such action the legs and lower part of the body will gradually sink till he come into an upright position in which he will continue suspended, the hollow of his breast keeping the head uppermost.

"But if, in this erect position, the head is kept upright above the shoulders, as when we stand on the ground, the immersion will, by the weight of that part of the head that is out of the water, reach above the mouth and nostrils, perhaps a little above the eyes, so that a man cannot long remain suspended in water with his head in that position.

"The body continuing suspended as before, and upright, if the head be leaned quite back, so that the face looks upwards, all the back part of the head being under water, and its weight, consequently, in a great measure supported by it, the face will remain above water, quite free for breathing, will rise an inch higher every inspiration, and sink as much every expiration, but never so low as that the water may come over the mouth.

"If, therefore, a person unacquainted with swimming, and falling accidentally into the water, could have presence of mind sufficient to avoid struggling and plunging, and let the body take this natural position, he might continue long safe from drowning, till, perhaps, help should come; for as to the clothes, their additional weight, when immersed, is very inconsiderable, the water supporting it; though, when he comes out of the water, he would find them very heavy indeed.

"I know by experience that it is a great comfort to a swimmer who has a considerable distance to go, to turn himself sometimes on his back, and to vary in other respects the means of procuring a progressive motion.

"When he is seized with the cramp in the leg, the method of driving it away is, to give the parts affected a sudden, vigorous, and violent shock, which he may do in the air as he swims on his back.

"During the great heats in summer there is no danger in bathing, however warm we may be, in rivers which have been thoroughly warmed by the sun. But to throw one's self into cold spring water, when the body has been heated by exercise in the sun, is an imprudence which may prove fatal.

"The exercise of swimming is one of the most healthy and agreeable in the world. After having swum for an hour or two in the evening, one sleeps coolly the whole night, even during the most ardent heats of summer. Perhaps the pores being cleansed, the insensible perspiration increases and occasions this coolness."

Women swim more easily than men. Their bony skeletons are lighter, they are better furnished with adipose tissue—the soft fatty portion of their bodies—and their heads are smaller. (*See* DROWNED and DROWNING.)

SYLLABUBS.—These are best made the day before they are wanted, or at least early in the morning, if they are to be sent to table the same evening. They require time to settle and let their froth get firm.

Birthday Syllabub. Put into a large bowl half a pound of sugar broken small, and pour on it the strained juice of two fresh lemons: stir these well together, and add a pint of port wine, a pint of sherry, and half a pint of brandy; grate in a small nutmeg, place the bowl under the cow, and milk two quarts into it. In serving it put a portion of the curd into each glass, fill it up with whey, and pour a little rich cream on the top. The rind of a lemon may be rasped on part of the sugar when the flavour is liked, but it is not usually added.

Posset Syllabub.—Mix a quart of thick cream with a pound of lump sugar, and a pint of white wine; rub a few lumps of sugar upon the rind of two or three lemons to extract the essence, and pour upon them the juice of three lemons; add this to the cream, and whisk it one way for half an hour, or until thick.

Solid Syllabub.—Put into a bowl three-quarters of a pint of cream and the juice of one large lemon; mix these well together, and flavor with sweet wine, brandy, and sugar to taste. Put an ounce of isinglass (or gelatine) into a sauce-pan with half a pint of water and boil it slowly, with a piece of lemon-peel in it, until the isinglass is quite dissolved; then pour it into the bowl over the other ingredients, stirring well for five minutes; then pass it through a colander, and put into moulds to cool and stiffen. If this syllabub is to be served in glasses, a smaller quantity of isinglass will suffice.

Whipped Syllabubs.—Weigh seven ounces of fine sugar, and rasp on it the rind of two fresh lemons, then pound or roll it to powder,

segments near the tail drop off. Each fully matured segment is called a "proglottis"; and when these pass away with the excreta, the patient is known to be suffering from tape-worm. This worm is usually solitary, is found in the small intestine, and rarely affects children under three years of age. 2. *Tænia medio-canellata* is another kind of tape-worm, and the more common of the two. It resembles the preceding in every respect, except that there is no proboscis on the head and no hooklets. 3. *Bothriocephalus latus*, or broad tape-worm; it is the largest of all, and is often twenty or thirty feet in lengh and an inch broad. The head is blunt and flattened from behind forwards; there are no hooklets; the anterior segments are narrow at first, but widen gradually so as to attain their greatest width towards the centre of the body; towards the tail end, the segments diminish in width, but increase in depth, so that the worm is much thicker in the posterior than in the anterior part, where it is flattened. The total number of joints has been said to be four thousand. These three varieties are the most common, and they are called by some cestoid worms, because they belong to the natural order Cestoidea.

The mature segment or "proglottis" of these worms contains both male and female organs of reproduction; when one mature segment has become impregnated with another mature segment by contact with it, eggs are formed. These eggs remain in the "proglottis" until it escapes from the bowel, when the "proglottis" itself bursts from the growth of the eggs within; when the ova escape in this way, they may be eaten by some animal, or even taken into the stomach by drinking water into which they have got. When the embryo in this way enters into a pig or rabbit, it breaks its shell, and, boring through the intestinal wall, lodges in the tissues; here it forms a cyst, where it may attain a large size, and develops an animal consisting only of a head and neck. Thus it will be seen that the eggs of a tape-worm in man will not produce a tape-worm in another animal, but a body known as a cysticercus, or an animal in an intermediate stage; now when a cysticercus is swallowed by man, the fully developed tænia or tape-worm will be produced. The two stages cannot take place in the same animal. There are a great many tape-worms of different kinds, and many animals, as the dog, cat, and rabbit, are liable to them as well as man. We may chance to swallow the ova of the tape-worm in the dog by eating water-cresses, or drinking water in which the embryo has happened to be; and if this be done, we shall not suffer from tape-worm, but from the intermediate variety, and thus a cyst may form in some organ, and grow so as to cause some inconvenience, and even danger to life. These cysts are often called hydatids, and the liver is the most common seat; they rarely heal of themselves, but generally form rounded tumors which cause very little pain or disturbance; they generally contain fluid, and attached to the inner wall of the cyst are those curious bodies known as cysticerci, or the worm in the intermediate stage. These cysticerci, when removed from a cyst alive, may be swallowed by man with impunity, but if given to a dog again, they will develop in its intestine into a mature worm. Tape-worm in man is not caused by swallowing the ova, but by eating meat in which the cysticerci are lying. Pigs and rabbits provide us with the *Tænia Solium*, while oxen may give us the *Tænia medio-canellata*. When the mature worm is developed in us, the ova which escape may in their turn supply these animals with fresh material for forming cysticerci. Hence it is an important thing to burn all portions of worms that are voided. The so-called *measly pork* is pork containing hydatids; and the man or animal eating this pork before it is cooked (cooking kills them) takes these hydatids into his stomach where they are sure to develop into tape-worms.

Treatment.—Nothing should be done until the passage of joints with the excreta gives the infallible sign of the presence of the worm. The only way to dislodge tape-worms is to render their habitation disagreeable to them; and for this purpose various drugs (called anthelmintics) are employed. Oil of turpentine, petroleum, the oleo-resin of the male fern, pomegranate bark, or Kousso, the flower of *Brayera anthelmintica*, may be used advantageously. An emulsion prepared from the seeds of the common pumpkin has been used with good effect, and has the merit of causing no disagreeable constitutional symptoms. Santonine may be given in doses of three to six grains three times a day. The oil of worm-seed is used in doses of five to ten drops. Probably the oil of the male fern is the remedy most generally successful. Previous to its use the bowels should be cleared out by a dose of castor oil. No food should be taken after the noon-meal. The following morning a drachm of the oil should be taken fasting, and followed in two hours by a tablespoonful of castor oil. Unless the head of the worm is obtained there is no cure, for it will go on producing new segments indefinitely. Tape-worm may cause much inconvenience, but there is little danger.

TAPIOCA.—The pith of the *Jatropha Manihot* or cassava tree, imported from Brazil and the East Indies, and exceedingly nutritious and agreeable to the palate when flavored by the addition of milk, spices, fruits, &c. It is very wholesome at all periods of life. It is adulterated to some extent with sago, potato-starch, etc., which can scarcely be detected. It is best to buy tapioca in small quantities. Keep it in covered jars or boxes, in a dry closet. (*See* BLANC-MANGE, JELLY, PUDDINGS, and SOUP.)

TAR.—A thick, black, treacly-looking substance, with a strong and peculiar odor, obtained by the destructive distillation of various species of pine. If water be shaken with tar the water smokes up, becomes brown, and has something of the smell of tar. This water was

at one time much extolled as a medicine. From the various substances it contains, tar is a stimulant of value, especially for outward application. In some incorrigible forms of skin disease, especially in the hands and feet, tar has done good, particularly if the disorder be of a scaly kind. In many of these cases it may be given internally as well as externally. Tar itself, or its vapor, has been used with great advantage in certain cases of lung disease, especially in chronic bronchitis and diseases complicated by it. The dose is about 30 grains made into a pill. An ounce or two of tar-water may be taken at a dose. An ointment consisting of tar and beeswax has admirable healing properties.

TARLATAN.—A kind of thin, gauzy muslin much used for ladies' summer dresses, etc. French tarlatan is best in the finer grades, and is one of the most delicate of woven fabrics. A yard wide.

TARRAGON.—This aromatic plant, or rather the leaves and young tops, are frequently used in salads, soups, pickles, etc. It has a hot, pungent taste, and when soaked in vinegar, is highly esteemed as a fish-sauce (*see* VINEGAR.) Tarragon is in season in the fall months.

TARTAN. (*See* PLAID.)

TARTARIC ACID.—This exists in several acidulous fruits, particularly the grape and the tamarind, but always combined with lime or potash. The juice of the grape is remarkable for containing abundance of the bitartrate of potash; and during the process of making wine this salt is deposited in the form of a hard crust, and particularly on the sides and bottom of the wooden casks in which the wine is kept to ferment and purify. This substance is called *tartar*, and being impure, and colored by the wine, it is dissolved and purified; it is then white, and becomes the acidulous substance familarly known as *cream of tartar*. From this the pure *tartaric acid* is prepared by separating the potash from it by a chemical process. This acid is commonly used in cookery, and also for the production of effervescing drinks; 10 grains or so is the ordinary quantity for the latter purpose,—it should be dropped into a tumbler of water and drunk instantly.

TARTS.—Tarts differ from pies in having no upper crust. The fruit must also in every instance be previously cooked.

Apple Tart.—These may be made of dried or fresh apples. If of dried apples, stew them in the water in which they are soaked, adding more, if needful; beat them to a pulp and make them quite sweet with sugar; season to the taste with grated lemon peel, cinnamon or nutmeg. Boiled cider added while the apples are stewing gives a fine flavor. If made of fresh apples, pare, quarter, core and add hardly enough water to cover them; stew until the fruit is broken, and the water almost absorbed; beat in sugar and spices to the taste. Put it in paste lined plates, ornamented with bars of pastry, and bake in a quick oven. An ordinary apple pie, flavored with fresh lemon, may be converted into *creamed* apple tart, by cutting out the cover while warm, leaving only about an inch border round the edge, and pouring over the apples when they have become cold, from half to three-quarters of a pint of rich boiled custard. The cover divided into triangular sippets, was formerly stuck round the inside of the tart, but ornamental leaves of pale puff-paste have a better effect. Well-drained whipped cream may be substituted for the custard and be piled lightly over the fruit.

Apricot Tart.—Stew *green* apricots till tender, either in a jar placed in an oven or in a stew-pan, with a little water and sugar; let them stew uncovered until the juice is nearly absorbed; spread in paste-lined plates and bake at once.

Barberry Tart.—Put barberries over the fire with a little water; cover and heat slowly, stew gently until cooked, then add an equal weight of sugar, and let them simmer until the syrup is quite thick. When cold spread them on plates lined with pastry, and place designs of puff paste over them. It may be in flat or twisted bars, forming squares or diamonds, or rings, crescents, or leaves.

Blackberry Tart.—Stew ripe Lawton blackberries in their own juice until tender; add coffee sugar to the taste, and when dissolved take from the fire; when cold put them on paste-lined plates, ornament with bars, place in a quick oven; remove when crust is baked.

Cranberry Tart.—Wash the cranberries well, and simmer them in a very little water until they burst open and become soft; then run them through a colander to remove the skins, and sweeten to taste; line small pans with a good crust, fill up with the fruit, put a cross-bar of pastry over the top. Bake in a moderate oven.

Cream Tart.—Beat three eggs well, and add three heaping teaspoonfuls of sifted flour; stir the mixture into a pint and a half of boiling milk; add a saltspoonful of salt, and sweeten to taste; flavor with rose-water or essence of lemon. Line some small tart-pans with a good crust and bake in a quick oven; fill up with the above mixture, sift powdered sugar over the top, and put them back into the oven a few minutes till they are a little browned.

Currant Tart.—Use either green or ripe currants, make as directed for Gooseberry Tart.

Damson Tart.—Wash a pound of damsons, heat them slowly in a covered vessel, and let them stew until the skins are soft; add a pound of sugar, stew a few minutes and spread them on paste-lined plates, ornament the top. Bake in a quick oven.

Gooseberry Tart (Green).—Take the stems and withered flowers from a pound of full grown gooseberries; put them in a saucepan; cover and shake it occasionally until there is juice enough to prevent burning; then stew until tender; add a pound of granulated sugar, and when dissolved remove from the table; put it in plates lined with pastry; ornament with strips of puff-paste. Bake in a quick oven.

Gooseberry Tart (Ripe).—Make as directed in above recipe.

Lemon Tart.—I. Mix a tablespoonful of corn-starch with two of cold water; stir in half a pint of boiling water; pour this on two ounces of creamed butter and half a pint of sugar; add the juice and grated yellow rind of a lemon, and one egg beaten smooth and thick; mix well and bake in a paste-lined plate.

II. Take: eggs, 9; lemons, 2; sugar one pound; butter, 3 oz; milk 1 pt.; flour 1½ even tablespoonfuls; almonds, ¼ lb.

Beat the yolks of the eggs without the sugar until very light; add the flour and butter, rubbed together until smooth and soft, the almonds, blanched and pounded, the juice and grated yellow rind of the lemons, the milk and well beaten yolks; lastly beat in gently the whites whisked to a stiff froth. Bake in paste-lined plates.

Orange Tart. Cream one ounce of butter; stir in the grated yellow rind of two oranges and the juice and soft pulp of three; add four well beaten eggs, half a pint of sugar, four and a half tablespoonfuls of rolled and sifted cracker, and half a pint of milk. Bake as above.

Raspberry Tart.—Make as directed for Blackberry Tart.

Raspberry Tart with Cream.—Line a small pie-pan with a thin puff-paste; put in ripe raspberries, strew fine sugar over them, cover with a thin crust, and bake. Cut it open, and have ready the following mixture, *warm:* Half a pint of cream, the yolks of two or three eggs well beaten and a little sugar; add this to the tart and return it to the oven for five or six minutes.

Rhubarb Tart.—Line a plate with puff-paste and cover it to the rim with a rich *compote* of rhubarb; cut the paste on the rim at intervals of an inch, making squares; double every one with one fold into a triangle, cover the *compote* with large diamonds formed with strips of the paste, and bake at once.

TARTLETS.—These may be made of any kind of preserves by lining small patty-pans, of any shape, with puff-paste, and baking them till half done; then fill them with the preserve, and finish the baking.

TATTING.—A kind of lace edging woven or knit of common sewing thread, with a peculiar stitch. It is very durable.

TAUTOG. (*See* BLACKFISH.)

TEA. (the meal). (*See* SUPPER.)

TEA.—As sold in the shops, tea is the leaf of the tea-tree, dried and stored for use. These leaves are gathered at three or four different seasons, by which in some measure the different qualities of tea are produced, those first picked being the most valuable and the last coarse and large. The young leaves are narrow, convoluted, and downy; the middle-aged have their edges serrated and veined with more or less delicacy, while in the old leaves the serration and veining are more marked, and in addition, some peculiar hoops are developed along the margins, which are readily seen when the leaves are closely examined. All teas are classed as black and green, depending partly on the age of the leaves, partly upon the locality where they are grown, and partly upon the method of drying. Thus the black tea is not only roasted in a shallow iron vessel, called the *Kus*, but it is also again submitted to the action of a charcoal fire, in sieves. Green tea, on the other hand, escapes the second process. As the names of the different teas relate to the time of their being gathered, or to some peculiarity in their manufacture, consumers should know something about them.

Black Teas.—As soon as the leaf-bud begins to expand, it is gathered to make *Pekoe*. A few days' later growth produces what here is called *Black-leaved Pekoe*. The next picking is called *Souchong*. As the leaves grow larger and more mature they form *Congou;* and the last and latest picking is called *Bohea*.

Bohea is called by the Chinese *Ta-che* (large tea), on account of the maturity and size of the leaves. It contains a larger proportion of woody fibre than other teas, and its infusion is of a darker color and coarser flavor.

Congou, the next higher kind, is named from a corruption of the Chinese *Koongfoo* (great care, or assiduity). This forms the bulk of the black imported, and is most valued for its strength.

Souchong, *Seaon-chong* (small, scarce sort), is the finest of the stronger black tea, with a leaf that is generally entire and curly. It is much esteemed for its fragrance and fine flavor.

Pekoe is a corruption of the Canton name (Pak-ho, white down), being the first sprouts of leaf-buds; they are covered with a white silky down. It is a delicate tea, rather deficient in strength, and it is principally used for flavoring other teas.

Green Teas.—The following are the principal kinds: *Twankay*, *Hyson-Skin*, *Hyson*, *Gunpowder*, and *Young Hyson*.

Young Hyson (when genuine) is a delicate young leaf, called in the original language, *Yu-tsien* (before the rains), because gathered in the early spring.

Hyson, from the Chinese word, *Hetchune*, which signifies flourishing spring. This fine sort of tea is gathered in the early part of the season. There is extreme care and labor used in the preparation of this tea; each leaf is picked separately, and nipped off above the foot stalk, and every separate leaf is twisted and rolled by the hand. It is much esteemed for its agreeable flavor.

Gunpowder, as it is called, is nothing but Hyson rolled and rounded to give it the *granular* appearance whence it derives its name. The Chinese call it *Choo-cha* (pearl tea).

Hyson-skin is so named from the original Chinese term, in which connection the *skin* means the refuse or inferior portion. In preparing Hyson, all those leaves that are of a coarse yellow, or imperfectly twisted appearance, are separated and sold as *skin tea*, at an inferior price.

Twankay is the last picking of green tea, and in addition to the leaf being older it is not so much rolled or twisted as the dearer descriptions; there is altogether less trouble bestowed on its preparation.

The nutritive value of tea is very small, but as Dr. Edward Smith has proved by an elaborate series of experiments, it is a powerful respiratory excitant, and causes the assimilation and transformation of other foods. In selecting tea it must be borne in mind that all genuine teas possess approximately the same amount of theine, and for dietetic purposes, all, whatever their price, are practically equal. The only real difference between the cheapest black tea and the Russian barovan at twelve dollars a pound is a difference of flavor. Tea should be chosen by the agreeableness of its odor, and as whole as possible, in order that its leaves may be readily examined; and the greatest care should be taken that it has not been exposed to the air, which destroys its flavor. Buy it in small quantities and keep it in a tin canister with a closely-fitting top.

To make Tea.—Allow one good teaspoonful of tea to each teacupful of the infusion that will be required. Before putting the tea in, scald the tea-pot well and pour off the water; then put in the tea, pour on enough *boiling* water to cover it well, and let it stand ten minutes on the back part of the stove to "draw." Fill up with as much *boiling* water as will make the required quantity of tea, and send hot to table. The water used in making tea must be boiling *hard* as it is poured in; *but under no circumstances must the tea boil after the water is added.*

TEA-POTS.—With respect to tea-pots, the form is of less importance than the material of which they are made. About thirty years ago there was a warm and learned contest respecting the best substance for tea-pots, that is, what they should be made of, to "draw the tea" best. It is obvious that the nature of the material itself will have no particular action upon the tea, and that the question would be decided by determining what substance kept the water hot the longest. It had been supposed, from observation, that metal tea-pots performed this best; and yet the doctrine of the conducting power of bodies, as understood at that time, appeared to be in favor of earthen-ware, which, being a worse conductor than metal, was supposed to prevent in a greater degree the escape of heat. Each substance, therefore, had its advocates: theory appeared to decide for one, while experience declared for the other. In the mean time, a discovery made by Professor Leslie, of Edinburgh, threw a new light upon this subject. He found that, although all heated substances throw off invisible rays of radiant heat, yet that the quantity projected depended much more upon the smoothness or roughness of the surface than upon the conducting power of the body; and that *polished* metal, although one of the best conductors of heat, was one of the worst radiators, metal not polished being a good radiator as well as conductor. Although earthen-ware, particularly the black unglazed sort, then so much in use (Wedgwood's), is a bad conductor, yet it is a better radiator than the polished metal, and, consequently, throws off more heat. Water, of course, cools sooner in an earthen-ware tea-pot, particularly if not glazed, than in one of polished metal. Since the date of this discovery, bright metal tea-pots have been considered to be most effectual in preserving the heat of the water; and hence both theory and practice now agree as to the substance best adapted for making a strong infusion of tea. The metal tea-pot, however, must be *kept bright;* for, if not, it is worse than the earthen-ware, as it is the polish of the surface only that acts in preventing the radiant heat from escaping.

The *tea-urn* is certainly the most elegant mode of supplying water for tea at table. It is made in the form of a vase, but in a great variety of patterns. In the old-fashioned ones there is a vertical tube, into which a cylinder of iron, heated red-hot, is slipped down and covered by a small lid, and that in turn by the cover of the urn. The improved urns have lamps below them, so that the water can be kept hot for any length of time.

TEAL.—There are two varieties of this small fresh-water wild duck: the *blue-winged* and the *green-winged.* The flesh of both is excellent, though that of the green-winged is considered rather the better of the two. The blue-winged teal is in season in September, October, and November; and the green-winged from September to January, though during the latter month it is somewhat scarce. (*See* DUCK.)

TEETH.—Temporary teeth—20 in number—begin to appear at about the seventh month, and their appearance is generally completed at the age of two years.

Attention to these teeth is of more importance than is generally supposed. The child should be taught to brush them every night and morning, not only to prevent decay, but to form the habit of brushing, so that when the permanent teeth appear, the child will be trained to give them proper care. If the temporary teeth are decayed they should be filled, that pain may be avoided and that they may serve the purpose of mastication during this period of rapid growth. As the eight molars (double teeth) are retained until about the twelfth year, this becomes of considerable importance. Moreover, if the temporary teeth are lost before the permanent teeth are ready to take their place, irregularities of position may ensue. If, however, the temporary teeth have been neglected until they have become decayed and painful, the nerve should be destroyed, or, as a last resort, they should be extracted.

The permanent teeth—32 in number—begin to appear at about the sixth year, and their appearance is completed when the wisdom teeth come, between the eighteenth and twenty-fifth year.

The first to make their appearance are the four molars (double teeth). They come in back of the temporary teeth, the jaw by this time having enlarged sufficiently to give them room. As no teeth are displaced, these new molars are often believed to belong to the first set, and are therefore neglected when decayed. At this period, decay progresses rapidly, and it is of great importance that these four back teeth should be carefully watched and the cavities filled before they become large and painful. The front teeth or incisors are the next to appear. As they advance, the roots of the temporary teeth are absorbed, until the teeth loosen and fall out. The new teeth are often crowded, and appear large in proportion to the jaw. This condition will generally be corrected as the child grows older and the jaw expands. The teeth do not increase in size after they appear, but complete their growth at the ends of their roots.

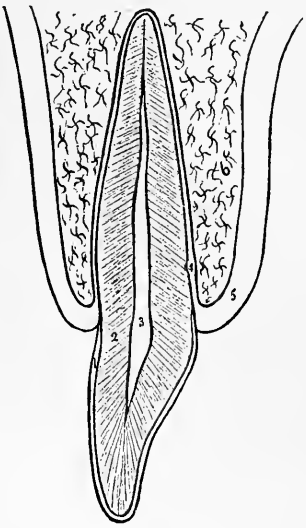
Irregularities. In case of marked irregularities, the advice of the dentist should be sought. Early attention may save much trouble and annoyance. This is especially true where one or two of the upper front teeth come in such a way as to close inside the lower teeth—their normal position being on the outside when the jaws are closed. The longer such a condition is neglected, the more difficult is it to overcome. During the time the temporary teeth are being changed for the permanent ones—a period of six or seven years—the gums are more or less inflamed and irritable, the fluids of the mouth of an acid nature, and decay rapid and destructive. The teeth should, therefore, during this time, be brushed carefully, and be frequently examined by the dentist.

Structure. This should be considered in order to fully understand the diseases to which they are liable. That portion of a tooth which projects from the gum is covered by the *enamel*, while the root is surrounded by a membrane which connects it with the jaw. This membrane, the *periosteum*, holds the tooth in its socket, and forms a sort of cushion, which allows a slight movement of the tooth, and serves to break the shock of mastication. It is a vascular membrane and supplies the outer portion of the root with vitality. It is often the seat of severe inflammatory action, as will be shown hereafter.

Under the enamel lies the *dentine*, or "bone," which makes up the body of the tooth. It is permeated by innumerable minute tubes, which branch from the pulp or "nerve," and which allow the circulation of the watery, nutritive part of the blood. These tubes are too small, however, to admit the red corpuscles.

By many observers they are believed to contain minute nerve filaments, which branch into them from the pulp. This view seems to be supported by the fact of the pain that attends the cutting out of decay from cavities that are to be filled.

The *pulp*, popularly called the "nerve," occupies a chamber in the center of the body of the dentine, and corresponds in shape to the



Magnified Section of Front Tooth.

1. Enamel.
2. Dentine.
3. Pulp or nerve.
4. Periosteum.
5. Gum.
6. Alveola or socket.

outline of the tooth. It is composed of a network of minute arteries, veins, and nerves. It is the tissue which gives nourishment to the greater part of the tooth, and the one from which the tooth first gradually grew. The growth of a tooth is a slow process, and is accomplished by the gradual ossification, or dentinification, more properly, of the circumference of the pulp. In the teeth of young persons the pulp is large and comparatively near the surface, but in old age it is small, having ossified and receded until sometimes only a thread-like filament remains.

Decay of the teeth is due to the action of acids upon them. These may result from the decomposition of particles of food left between the teeth, or may find their way into the mouth from the stomach. The mucus of the mouth adhering to the teeth may become acidulated and cause decay. Badly-cooked and hastily-eaten food, causing dyspepsia and a disturbance of the whole alimentary tract, is one of the most active agents in the production of decay. Acids from the stomach find their way into the mouth in the same manner as mucus from the lungs, or bronchial tubes; hence the rapid decay of the teeth of those who have disturbed digestion. This is particularly the case with women during pregnancy, when more or less disturbance of the stomach may be expected. Sweets, in themselves, are harmless. They injure the teeth only as they disturb digestion. To understand the cause of decay is to suggest, in a measure, the means of its prevention. If from particles of food, they should

be removed. If from acid mucus, it should be brushed away. If from the acids of the stomach, neutralizing agents should be used, as bicarbonate of soda (from one-fourth to a full teaspoonful in a pint of water), and used as a mouth-wash ; or the teeth may be promptly brushed with soap, or, if preferred, with chalk.

TOOTHACHE.

By studying the structure of the teeth it will be easy to understand the three sources from which pain may arise. It may be from exposure of the dentine, exposure of the pulp, or from an inflammation of the periosteum.

Exposure of the dentine is generally caused by decay, but it may occur by a blow breaking off the enamel, or by a recession of the gum from the neck of the tooth. The pain is generally not very severe, though it may sometimes become a continual ache. It is aggravated by contact of foreign substances, by sudden changes of temperature in the mouth, and very often by the irritating action of articles of food, as acids, sweets, salt, etc. The discomfort is greatly increased if the saliva be acid, which is almost invariably the case when there is disturbance of digestion. The exposure at the necks of the teeth caused by a recession of the gums, may give rise to such an irritable condition, that the brush cannot be used without pain. If, however, its use is abandoned, the accumulation of acid mucus adds to the sensitiveness and the teeth become too painful to be touched or used. The treatment of sensitive dentine generally requires the services of the dentist. The filling of cavities will almost invariably give prompt relief. If the cavities are large, and metallic fillings are used, tenderness from contact of hot or cold food or drink, may continue for a time. This, however, will generally soon pass away. Tenderness from a broken tooth may often be removed by thoroughly polishing the broken surface.

Sensitiveness at the necks of the teeth, caused by recession of the gums, is more difficult to control. If the teeth at this point show signs of decay, filling of course is demanded, and will give relief; but it often happens that there is no decay, the sensitiveness arising simply from the exposure of the dentine above the edge of the enamel, associated with acid saliva. To cut out and fill these places is not always advisable, for the irritating condition of the saliva may pass away and leave the teeth free from tenderness, and, if kept clean, comparatively safe from decay. In these cases, considerable relief may be had by the use of agents that will neutralize the acid saliva, as the wash of bicarbonate of soda, above described, or soap or chalk freely used for brushing the teeth. If these fail, the tender places should be touched with nitrate of silver (lunar caustic). This is certain in its action, but has the objection of discoloring the places to which it is applied. Insert a stick of it in a quill, and it can be applied directly to the spot. As it "burns" what it touches, it should be used with great care.

Exposure of the pulp gives much more severe pain. It is caused, of course, by decay of the teeth. It is generally preceded by an uneasy feeling similar to that caused by sensitive dentine. This may go on for weeks, the discomfort gradually increasing, until some unusually irritating cause starts the tooth to aching steadily. Sometimes there is no warning of the progress of decay, until by biting some hard substance a portion of the tooth is broken, a large cavity discovered, and the tooth set violently aching. The pulp being a highly organized and delicate tissue, and lodged in an unyielding chamber just large enough to accommodate it in a state of health, the slightest inflammation causes swelling and pressure, and the pain of this pressure further adds to the inflammation. This is particularly the case when the point of exposure is very slight. If the exposure is large, and the pulp, in consequence, less confined, the pain is likely to be less severe, and more readily reduced. In the hands of a dentist, the treatment of an exposed pulp consists in destroying and removing it or in using means to protect and conserve it. Which course will be best to pursue must depend upon each particular case.

Soothing Remedies for Pain from exposure of the Pulp. If a dentist cannot be had, it may be alleviated by placing in the cavity of the tooth a roll of cotton moistened with a quarter of a drop of creosote, a drop of oil of cloves, of the tincture of hamamelis (Pond's extract), of laudanum, of oil of peppermint, or of laudanum and lead-water. If the saliva is acid, and the teeth feel "on edge," the wash of bicarbonate of soda above given, or a little chalk placed in the cavity, will partially quiet the pain. Sometimes a drop of chloroform placed in the cavity on cotton will soothe. These remedies apply equally to exposure of the pulp in the permanent or temporary teeth.

Saving "Nerves." Every effort that promises a chance of success should be made to save the pulp alive, devitalization being accepted only as a last resort. No matter how carefully a devitalized tooth may be treated, it is still of less value than if the pulp were alive. Deprived of the nutritive fluids obtained from the pulp, the tooth gradually degenerates, and becomes more liable to decay. Also, when a tooth is deprived of its pulp, increased demand is made upon the periosteum, which sometimes results in inflammation of that membrane. It is also sometimes impossible to thoroughly remove the extreme end of the pulp, particularly from the back teeth which have more than one root, and are more or less inaccessible. Even a small portion allowed to remain may become decomposed and give rise to inflammation of the periosteum. If the exposed portion be not too large, and inflammation and pain not of long standing, a reasonable prospect exists of still saving the pulp alive. This will be accomplished, however, only by the most careful treatment, and by a delicate appreciation on the part of the dentist of the exact condition of

the pulp. In this conservative treatment, advantage is taken of that gradual ossification which takes place at the circumference of the pulp. A non-irritating material is carefully laid on the exposed portion, and over this capping a temporary filling is placed, and the tooth allowed to remain for months, or years. Ossification may have then progressed to the extent of closing the opening, and protecting the pulp with a bony wall sufficiently strong to bear the insertion of a permanent filling.

The irritation at the point of exposure seems to stimulate the ossifying process, and sometimes only a few months will be needed to close the opening into the pulp chamber. On removing the temporary filling after sufficient time has elapsed, if ossification has not occurred, the pulp will be found sometimes partially alive, but generally entirely destroyed. It should then be removed and the root filled. The process of capping the pulp is comparatively free from pain. The material at present most successfully used is the white oxide of zinc, moistened with sufficient creosote or carbolic acid to form a thick paste. After drying the cavity, and removing as much of the decay as can be done without wounding the pulp, a little of this paste is laid carefully over the exposed point. Pain is seldom felt, owing to the soothing effect of the creosote. Over this paste, which does not harden, may then be placed a paste of oxy-chloride of zinc, mixed to the right consistency. This hardens in a few moments, making a solid covering which protects the pulp from pressure, and serves as a temporary filling.

"Killing Nerves." The destruction of the pulp or "nerve," is accomplished by an infinitesimal quantity of arsenic applied directly to the exposed point. After a sufficient time has elapsed, the pulp should be thoroughly removed from its chamber in the tooth, and from the canal in each root. The canals and chamber should then be filled with some indestructible material, when the cavity in the crown may be filled as if the pulp had not been disturbed.

If the pulp be destroyed, but not removed, and only the cavity of decay filled, inflammation of the covering membrane of the root (*periosteum*) and pain of the severest kind may occur at any time. In fact a pulp treated in this manner, would be almost certain, sooner or later, to give trouble. In such cases, decomposition of the pulp ensues, and the gases find escape only through the end of the root, and pressing there upon the periosteum cause pain and swelling which seldom subside until an abscess is formed, and an opening made in the gum.

If the removal of the pulp is neglected, there is also the danger of discoloration of the tooth, which, in the front of the mouth, may be a source of great annoyance. This discoloration is due to the decomposed tissue of the pulp becoming injected into the tubes which have been shown to exist in dentine. The destruction of the pulp is not necessarily a painful process. If aching badly, palliative remedies should be first applied, and then in securing the arsenic in place, care should be taken to avoid pressure upon the pulp.

Pain in the wrong Tooth. Sometimes the pain from an exposed pulp will seem to locate in a sound tooth. It will sometimes seem to come from a tooth in the opposite jaw. This is because the nerves that supply the upper and lower jaw are branches from the same root, so that pain caused at the extremity of one of them may be felt at the extremity of any of the others. Exposed pulps, in the wisdom teeth particularly, are quite likely to cause pain that will locate in some other tooth. The rude touch of an instrument, or the disturbance of the cavity, will generally transfer the consciousness of pain to its real source.

"Ulcerated" Teeth. Pain from inflammation of the periosteum is more difficult to control. It partakes more of the character of a general inflammation, often spreading to the sockets of the adjoining teeth, and sometimes involving the whole side of the face. It can be traced almost invariably to a pulpless tooth. It is not unusual for sound teeth to lose their vitality. The shock of a blow upon a tooth may sometimes be sufficient to cause the death of its pulp. Occasionally, in low states of the system, there will occur spontaneous and painless death of the pulps. The first symptoms of ulceration are a slight feeling of uneasiness in the tooth, which seems to be longer than its fellows, and tender to the touch. The pain increases to a dull, heavy ache, accompanied by a throbbing sensation, which corresponds in frequency with the beating of the heart. The result is generally an abscess, which may ultimately afford relief by breaking upon the gum, where it forms what is called a gum-boil.

The treatment of inflammation of the periosteum depends upon the stage it has reached, as well as upon the cause. If from a dead pulp, which has not been removed, but little relief can be expected until the pulp chamber is opened and the gases or fluid confined at the apex of the root allowed to escape. If the trouble is from a sound tooth, the chamber can be reached only by drilling through some part of the crown. If the inflammation exists about a tooth the root of which has been filled, its treatment must depend upon the extent to which it has progressed. The removal of the filling might give relief; but such fillings are not easily removed, and relief in many cases must be had from other means. In the first stages of inflammation efforts should be made to check it. The first consideration will be to avoid irritation of all kind. If the tooth feels elongated and tender to the touch of the opposing teeth, a cap of gutta-percha should be fitted over an adjoining tooth, in order to prevent the tender tooth from being struck in closing the jaws. The same effect may be secured by a little block of wood kept between the teeth on the other side of the mouth. Sometimes this security from irritation will be all that is required.

At this stage cold should be persistently applied inside the mouth to the gums over the aching tooth; this can be constantly done with a little rubber bag containing ice. Hot foot-baths should be employed, in order to direct the volume of blood from the head. Counter-irritation of the intestinal tract by an active cathartic may also be employed to advantage. In this early stage counter-irritants applied upon the gum over the tooth may divert the inflammation; for instance, equal parts of the tincture of aconite and iodine painted upon the gum. If these remedies fail, and the irritative passes on to the congestive stage, marked by swelling and excessive soreness, cold applied to the gum would be unbearable. All attempts at checking the inflammation should cease. There can now be little hope of preventing suppuration and the formation of an abscess. A leech applied to the gum will relieve pain by extracting the blood and reducing the tension; in some cases it may even prevent the impending suppuration. If this cannot be prevented means should be used to hasten it. Heat will be found most efficient. Hot water may be held in the mouth, and warm poultices applied to the gums. A roasted fig, split open and laid upon the gum, by retaining the heat softens the part and encourages the suppurative process. To relieve the tension and pain caused by the swelling, warm fomentations may be applied to the face. In the use of these, however, if the swelling is very great, care should be exercised, as the heat may induce the abscess to break out upon the face. If such danger impends, cold should be applied upon the face, and warm poultices kept upon the gums. Lancing may be resorted to when the abscess has made such progress that the pus can be reached.

Tartar. Inflammation of the periosteum and of the surrounding gums may be induced by accumulations of tartar on the necks of the teeth. Living and dead teeth are equally subject to this disease. Tartar is deposited from the saliva, and is composed for the most part of carbonate and phosphate of lime. It has also mixed with it fatty substances, epithelial scales, remains of oral parasites, etc. As it is derived from the saliva, its accumulation is most rapid upon those teeth that stand opposite the openings of the salivary ducts—upon the outer surfaces of the upper first and second molars, and the inner surfaces of the lower front teeth. It accumulates most, of course, on those surfaces that escape the friction of food in mastication, or that are not reached by the brush. Generally, it first becomes attached at the necks of the teeth, finding a sheltered place just at the margin of the gums. From this point it extends up under the gum, gradually causing strangulation of the minute vessels that give nourishment to the outer part of the root of the tooth, as well as causing mechanical irritation and chronic inflammation of the gums and periosteum. It sometimes extends up nearly to the end of the root, causing absorption of the sockets and loosening of the teeth. It is not unusual for teeth otherwise perfect, to loosen and fall out in this way. Its presence is shown by the spongy, swollen condition of the gums, by their being detached from the teeth, and their readiness to bleed when punctured, or from the use of the brush. This inflamed condition can be remedied only by the removal of the tartar with instruments. This should be done with great thoroughness and care, for if only a little of the tartar be left, it will form a nucleus for a new deposit. The roots should then be polished as well as their position will allow. Healing and contraction of the gums about the teeth may then be hastened by the use of astringent washes. If tartar again accumulates, as it will in most cases, it must be again removed, as only thus can the loosening of teeth be delayed.

Toothpicks. At the temperature of the mouth, only a few hours is sufficient to induce a putrefactive change of particles of food left between the teeth. They should be removed with the quill or wooden toothpick, or with floss silk. Silk is preferable, as it can be passed between teeth that stand in contact, and effectually cleanses the surface that cannot be reached by the pick or the brush. If this be too expensive, linen threads, such as used by shoemakers, may be substituted.

Toothbrushes should be used with great thoroughness every night and morning, and if practicable, after every meal. *Great care should be taken, however, to select brushes not too harsh and stiff, as they may do much harm to the gums.* On the other hand, if brushes are too soft, the teeth will not be well cleansed.

Powders should always be used, as by their help the sticky mucus is more thoroughly removed and the surface kept smooth and polished. The chalk of which they are mostly made, has also an affinity for the acids, thereby protecting the teeth. Soap is very cleansing, and may be always used to advantage. Most of the powders before the public may be considered reliable. The chalk and orris, of which they are chiefly made, are so cheap that there is no inducement for adulteration.

Washes for the teeth and gums may be used, but care should be taken to avoid those which are astringent. Such may be used to advantage in case of diseased gums, but in a state of health the teeth and gums need to be cleansed,not medicated. (*See* TOOTH-POWDERS.)

TEETHING. (*See* INFANTS.

TERRAPIN. (*See* SOUP and TURTLE.)

TETANUS.—An affection characterized by painful and rigid contraction of the voluntary muscles, aggravated from time to time by very severe spasms. The two chief forms are the *traumatic*, which occurs after wounds, and the *idiopathic*, without any manifest cause. In the former, the spasms are usually severe and acute; in the latter they are milder and chronic. The following are the usual symptoms in a severe attack of *traumatic tetanus:* After general uneasiness, headache, and feverishness, the

patient complains of stiffness of the jaws and at the back of the neck; swallowing is difficult, the voice is low and husky, and there is a peculiar expression of the face due to contraction of the muscles which move the lips and eyelids; the patient next suffers from painful cramp in the muscles of the face and neck, and, in consequence of permanent rigidity of the muscles of mastication and spasms of the gullet, is unable to take any food; to this stage, in which the mouth is firmly closed, has been applied the name of *locked-jaw;* the spasms then attack the muscles of the abdominal walls, and violent pain is felt at intervals at the pit of the stomach; the front of the abdomen is retracted, and the muscles during the severe paroxysms feel to the hand like a hard board; the voluntary muscles of the back and limbs finally become affected and very painful cramps are felt over the whole body, which as the affection progresses are divided by shorter and shorter intervals; the bowels are generally bound and there is often retention of urine; the symptoms increase in intensity, and at last death occurs either from pain and exhaustion, or in consequence of spasms of the diaphragm and other muscles of respiration; the mental faculties generally remain unimpaired, until very shortly before death. The usual duration of an attack of severe and fatal tetanus is from three to six days. Cases, however, have been recorded in which death occurred within a few hours after the commencement of the symptoms. The symptoms of acute traumatic tetanus vary much in different cases; the spasms may be restricted to a certain region or a certain set of muscles, or they may commence at the seat of the wound and not, as is usually the case, in the muscles of the jaw. The ordinary tetanic symptoms may be complicated by epilepsy, delirium, and coma.

There is no injury to the surface of the body, however slight it may be, of which acute tetanus might not be a result, and there is no relation between the extent and degree of the injury and the intensity of the tetanic symptoms. It has been known to follow slight contusions and blows with a stick or cane. It rarely occurs after clean cuts, and is mostly connected with contused wounds involving nerves and the fibrous structures, as fasciæ, tendons, and ligaments. With regard to locality, it has been stated that tetanus occurs more frequently after wounds of the hands and feet. The interval between the receipt of the injury and the commencement of the tetanic symptoms, the so-called period of incubation, varies in different cases. In the majority, the symptoms come on between the fourth and the tenth day; the period in many lasts from ten to twenty days, but is extended over the twenty-second day in only ten out of every hundred cases. It has never been known to exceed a month. The symptoms sometimes come after an interval of only a few hours, and one instance has been recorded in which a negro was attacked with tetanic spasms in a quarter of an hour after his hand had been punctured with a fragment of chinaware. The shorter the interval the more severe are the symptoms. Tetanus, when it occurs before the tenth day after the injury, is usually fatal; in cases occurring after the tenth day, the mortality is much reduced. Tetanus occurs much more frequently in males than in females, and in the latter its symptoms are less severe. Tetanus may occur at any period of life, but in more than half the number of recorded cases the patients were between ten and thirty years of age. It has been asserted that tetanus is most fatal in patients under ten years of age. The accession of traumatic tetanus does not seem to be influenced in any way by morbid conditions of the body, or by previous states of bad health. The healthy and the unhealthy, the strong and the weak, are equally affected. It has been stated that tetanus is met with more frequently at periods of the year in which there are frequent and sudden changes of temperature.

The course and symptoms of an attack of *idiopathic tetanus* resemble very much those of the acute traumatic form, but are rarely so intense. The chief causes of the so-called idiopathic tetanus are exposure to cold and wet, and intestinal irritation. It is rarely met with in this country, but occurs frequently in the tropics.

The symptoms of tetanus may resemble very much at first sight those of hydrophobia, and in some cases the medical attendant experiences considerable difficulty in establishing a perfectly satisfactory diagnosis. The following are the chief points of difference in these two dangerous affections: in tetanus the muscular spasm is persistent, and perfect relief never occurs for a single instant until a short time before death; in hydrophobia the spasms are always of brief duration, and alternate with periods of complete relaxation and relief; the persistence of the muscular contraction in tetanus is most marked in the lower jaw, which in almost all cases remains fixed and immovable. In hydrophobia there is a constant flow of saliva, and the patient complains of great thirst; in tetanus these two symptoms are usually absent; the countenance in tetanus is generally expressive of intense suffering; in hydrophobia, not so much of physical suffering as of excessive restlessness and mental excitement; in the latter affection the mental faculties are always much disturbed and the patient often falls into a state of violent delirium and maniacal excitement; in tetanus, on the other hand, the mind usually remains undisturbed, until the termination of the attack; in hydrophobia there is an aversion to fluids, the very thought of which very much excites the patient; in tetanus there is no mental aversion to fluids, but when an attempt is made to administer them, the patient endeavours to express by action his inability to open the jaws and to swallow. Any reliable history as to the bite of a dog about six weeks or two months previously, will at once establish the diagnosis in doubtful cases of hydrophobia.

Tetanus, though a very dangerous affection, is not always fatal; in acute cases, where the symptoms commence shortly after the receipt of a wound, recovery seldom occurs, but when the attack comes on after the tenth day from the receipt of the wound, and the tetanic symptoms last over fourteen days, recovery is the rule and death a rare exception. No case of recovery from hydrophobia has been hitherto recorded. Symptoms somewhat analagous to those met with in severe cases of tetanus are produced by poisonous doses of *strychnia* or *strychnine*. The symptoms of poisoning commence soon after the strychnine has been swallowed, and set in with shortness of breath, rigidity of the muscles of the neck and back, and painful tetanic spasms of the extremities; the body is usually arched backwards so as to rest on the head and heels. The muscles of the face are much convulsed, so as to produce a characteristic grinning expression called the risus sardonicus. All the voluntary muscles are attacked at about the same time, and there is no persistent contraction of the muscles of the jaw. In these respects, and also from the prominence, among the symptoms, of backward arching of the body, and from the occurrence of intervals of complete intermission, the phenomena of strychnine poisoning differ from those of acute traumatic and idiopathic tetanus.

Treatment.—No continued success has yet attended the administration of any one of the numerous medicinal agents that have been tried in cases of severe tetanus; calomel, opium, chloroform, belladonna, aconite, quinine, Calabar bean, and Indian hemp, have all been extensively used, in some cases with undoubtedly good results, in others with signal failure. No drug is yet known which has the power of arresting the course of the disease, and of controlling its severer symptoms. So long as tetanus is to be regarded as a disease which must run a certain course, the chief indications of treatment will be the support of the patient's strength and the relief of suffering and pain. Fluid and easily digested food, with wine or spirits, must be freely supplied, and when the patient is unable to open the mouth or to swallow, should be administered by injections or through an elastic tube passed through the nose into the gullet. Pain may be relieved by the internal administration of opium, by subcutaneous injections of morphia, or by inhalation of chloroform. In many cases painful and violent muscular spasm has been much allayed by the application, along the spine, of bladders of ice. Great care must be taken to guard the patient from all causes of excitement and irritation, and the room in which he is confined should be kept darkened and at an uniform temperature. It is very important that there should be a speedy and free evacuation of the bowels. In cases of traumatic tetanus following a wound, the injured part, if painful and inflamed, should be poulticed and kept as much as possible at rest.

TETTER.—An eruptive disease of the skin which often appears on the face and the side of the mouth, sometimes on the scalp, and occasionally about the waist. Give bicarbonate of potash or soda internally, and occasionally apply externally powdered oxide of zinc.

THERMOMETER.—A glass tube, with a bulb at one end and open at the other, containing mercury enough to fill it; is hermetically sealed when very hot. It is afterwards immersed in melting ice, and the point at which the mercury stands scratched on the glass; it is next placed in boiling water and the level of the mercury again noted. On the Fahrenheit scale this distance is divided into 180 degrees; on the Centigrade scale into 100 degrees; and on the Reaumur scale into 80 degrees. The freezing point is called zero on the last two scales, but 32 on the Fahrenheit scale. In a room where persons are sitting, the Fahrenheit thermometer should register from 68 to 70 degrees; in a room like a nursery, where the occupants are apt to be moving actively, 3 or 4 degrees lower. Medical thermometers are self-registering, being supplied with a small index in the bore of the tube, which is pushed upward by the mercury in its ascent, but does not fall again until shaken down with some force. As the index is liable to get shaken into the bulb, and thus render the instrument useless, many thermometers have a spiral in the bore near the bulb, to arrest the index. The normal temperature of the body, taken by holding the bulb of the thermometer five minutes in the armpit, with the arm closed down upon it, may be set down at 98¼ degrees, though it may normally rise to 100 degrees during the period of digestion. 102 degrees indicates fever and need of attention; 104 degrees indicates serious need of attention. After 108 degrees, recovery is almost unknown.

THROAT. (*See* SORE THROAT.)

THRUSH. — A disease very common amongst infants, very much dreaded but easily managed. It consists in a soreness of the mouth, lips, cheeks, tongue, throat (seldom extending to the stomach), with white creamy patches adhering to the surface. They can be easily removed, and underneath, the mucous membrane is red, sore, and sometimes bloody. These patches consist of remnants of food (milk, etc.), either natural or decomposed, with some matter and very little blood, and a vegetable microscopic parasite, the *oidium albitans*. They form whenever the infant's mouth is not kept scrupulously clean; they will also form in the mouths of adult patients, who are either too feeble or too unconscious to attend to their own cleanliness, and in such cases thrush is always a symptom of great danger because of great prostration. Thrush is avoided by cleanliness. When it is present, wash the mouth every half hour or every hour with a solution of a tablespoonful of borax in a half-pint of water, or with a drachm of the sulphate of soda in two ounces of water. Be sure that the white patches are well removed, although gentle rubbing may be required.

THYME.—This plant will grow anywhere, but it prefers a dry, poor soil; if the ground is rich, the plant will become too luxuriant, and lose its aromatic qualities. There are several varieties; that preferred for culinary purposes is the lemon-scented; it is also the handsomest in appearance. It is propagated by seeds or slips. Sowing should be performed from the middle of March to the middle of May; slips should be set out in the spring. It may also be propagated by layers, like carnations. Although a perennial, it becomes stunted after two or three years, and to ensure it in perfection the seed should be sown annually. The culinary use for thyme is principally for broths and soups; it is also a common ingredient in stuffings and to savor meats. The lemon thyme is less pungent than the common garden thyme, but much more grateful; hence it is used as a seasoning for veal and other meats where lemon-peel would be used, thus answering the purpose of two distinct spices. Thyme that is intended for winter use should be cut when in blossom, and after being well dried in the shade, hung up in paper bags. It is usually found for sale in a dried state, tied up in small bunches.

TICK. A strong, closely-woven, cotton cloth, generally striped black and white, which is used for bed, bolster, and pillow-cases. It comes in pieces a yard wide, and should be shrunk before cutting.

TIFFANY.—A species of gauze or very thin silk. It is of French manufacture, and is used in lining bonnets, hats, etc.

TIGER-FLOWER.—The Tiger-flower, or Tigridia, is a very showy Mexican bulb, growing about eighteen inches high; its flowers are four inches in diameter, and of most gorgeous coloring and curious form. They require the same culture as the Gladiolus, but will not live out of doors in winter in cold latitudes. There are as yet but four or five varieties, which bloom from July to October. These are: *T. conchiflora*, orange and yellow, with black spots; *T. conchiflora grandiflora*, lemon-color, spotted with crimson; *T. pavonia*, scarlet, spotted and tipped with yellow; *T. speciosa*, orange, with deep maroon-colored spots; *T. wheelerii*, a seedling from conchiflora.

TILES.—Plates or pieces of baked clay or earthenware, used for covering the roofs of buildings. Tiles make a heavier roof than slate, and are seldom employed in this country, and then only for offices and houses of an inferior class. There are two kinds of tiles, *plain tiles* and *pantiles*. Plain tiles are of the same form as slates, but are bedded and pointed with mortar. The pitch of the roof requires to be 45 degrees, and the tiles require frequent pointing. Pantiles are curved, and are laid on each other dry; they do not make so warm a roof as plain tiles and are more liable to get out of order. Common tiles are not nearly so durable as slates, being much affected by the frost; but when glazed they are very durable. When the red color of tiles is objectionable, they may be covered with a coat of anti-corrosive paint.

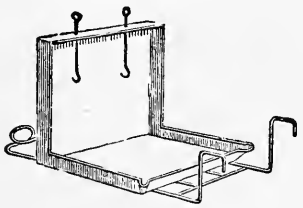
Encaustic tiles are the finer kinds, used for paving and decoration.

TIN-WARE.—What is usually called tin, when employed in the manufacture of household utensils, is in fact sheets of iron coated over or plated with tin; and this is true whether they are described as "common tin" or "block tin." As the use of tinning iron is to prevent its rusting, it is obvious that whatever wears off the tin lays bare the surface of the iron and exposes it to the action of moisture and air, which occasions its rusting. Care should be taken, therefore, that when frequent cleaning is necessary, the tinned ware shall be cleaned in such a way as not to wear away the surface unduly.

To clean tin-ware, mix a little of the finest whiting (common whiting contains generally a little sand) with a very little sweet oil, and rub the tin with this; then wipe it clean; after that, dust some dry whiting on it, and rub it off with chamois-skin. To prevent rusting, tin-ware should be kept in a dry place.

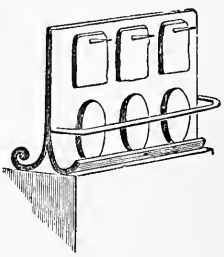
TINCTURE.—A tincture is a solution of any colored substance in spirits of wine; when not colored the solution is called a spirit. Many tinctures are used in cooking for flavoring, etc., and directions for making them are given elsewhere. (*See* ESSENCES and EXTRACTS.)

TOAST.—To make ordinary *dry* toast, cut very thin slices of bread from a loaf not less



Toaster for Chops or Bread.

than two days baked; place either one or two at a time on the toasting-fork, taking care not to hold them too near the fire; they should be just warmed on each side, then turned, and when browned nicely on one side, turn again, care being taken not to let them burn. When they are thoroughly toasted, they should be either placed upright on a plate, one against the other, or put into the toast-rack; but they should be kept near the fire until required for the table. Toast should never be made long before it is eaten, or it becomes tough and leathery. Some people cut the crust off the



Toaster for Bread or Muffins

bread before toasting. Graham bread makes excellent toast.

A very cheap apparatus by which bread or chops can be dressed before a clear fire is shown by the first of the preceding figures; and the second is peculiarly convenient when bread or muffins are required to be toasted quickly and in large quantities without much time and attention being bestowed upon them.

Anchovy Toast. (*See* ANCHOVY.)

Buttered Toast.—The bread should be cut rather thicker than for dry toast; toast in the same way, and as soon as a slice is done, butter it well, and lay in a plate near the fire.

Cider and Toast.—Take one third brisk cider and two thirds water, sweeten well, and crumble in toasted bread or toasted crackers, and grate nutmeg over the top.

Cream or Milk Toast.—I. Toast slices of stale bread as directed above; butter and put a layer of them in the bottom of a toast-dish, and pour over them a liberal supply of cream or milk, boiling hot and thickened with a little flour or corn-starch; add another layer of toast, and then more cream; and so on. Cover closely, let it stand five minutes, and serve.

II. Toast the bread to a delicate brown, lay it on a very hot plate, and pour over it cold, sweet cream; serve at once. For invalids and children with dainty appetites, this is very nice and easily digested. Some light fruit jelly will add to the relish and still be wholesome.

Egg Toast.—Break the eggs carefully into water, boiling hot, but not really boiling; the water must be slightly salted, and in sufficient quantity to cover the eggs. Simmer gently till the eggs are delicately cooked, or until the yolks are covered with a white film; then take them up with a skimmer and lay each on a slice of buttered toast. Butter and pepper may be added at table. Eaten with Worcestershire sauce, this makes an unequalled breakfast dish.

Water Toast.—Put slices of bread toasted brown, but not burnt in the slightest degree, into a pitcher, pour on enough *boiling* water to cover them, cover the top closely, and let it stand till cold; then strain off the water and sweeten it to taste. This is one of the best of bevèrages for invalids. A little lemon-juice may be added when the patient can stand it.

TOE-NAILS. In-Growing.—This most painful of the diseases of the nails is caused by cutting the nail, generally of the great toe, improperly, and then wearing a narrow, badly-made shoe. The nail beginning to grow too long, and rather wide at the corners, is often trimmed around the corner, which gives temporary relief. But then it begins to grow wider in the side where it was cut off; and, as the shoe presses against the corner, the nail cuts more and more into the raw flesh, which becomes tender and irritable. If this state continue long, the toe becomes more painful and ulcerated, and fungus (proud flesh) sprouts up from the sorest points. Walking greatly increases the suffering, till positive rest becomes indispensable.

Treatment.—Begin the effort at cure by simple application to the tender part of a small quantity of perchloride of iron. It is kept by chemists in a fluid form, though sometimes in powder. There is immediately a moderate sensation of pain, constriction, or burning. In a few minutes the tender surface is felt to be dried up, tanned, mummified, and it ceases to be painful. The patient, who before could not put his foot to the floor, now finds that he can walk upon it without pain. By permitting the hardened, wood-like flesh to remain for two or three weeks, it can easily be removed by soaking the foot in warm water. A new and healthy structure is found, firm and solid, below. If thereafter the nails be no more cut around the corners or sides, but always curved in across the front end, they will in future grow only straight forwards, and by wearing a shoe of reasonably good size and shape, all further trouble will be avoided. There are cases, however, in which evulsion of the entire nail is necessary. This requires the aid of a surgeon.

TOFFY OR TOFFEE. (*See* TAFFY.)

TOMATO.—At present there is probably no product of the garden which is used so extensively and in so many different ways as the tomato; to be produced *in perfection* it must be grown in very rich ground and receive frequent and copious watering; the vines must be pruned so as to admit the sun freely to the clusters of fruit. But it will grow well in almost any soil, with no more care than is involved in putting the seed into the ground in spring, and is extremely prolific. The common kinds may be planted in any out-of-the-way place where no other vegetable will grow, but the choicer varieties should be sown in rows about three feet apart, and the vines supported by uprights, so as to keep the fruit off the ground. The best varieties of the tomato are the *Trophy*, *General Grant*, *Cluster*, *Oak*, *Crimson Cluster*, and *Tilden*. Other good kinds are the *white apple*, which is excellent eaten raw, *smooth red*, apple and pear shaped, large and small *yellow*, *fig*, *cherry*, etc. Tomatoes begin to ripen in the South about the middle of April, whence they are brought to the Northern markets; they become plentiful in June, and are in season until the first heavy frosts. The perfection to which the art of canning fruits and vegetables has been brought enables us to have tomatoes fresh and good throughout the year. (*See* CATSUP, PICKLES, SAUCES, and SOUP.)

Baked Tomatoes.—Scald the tomatoes, peel them carefully, so as not to break them, and lay them in a deep dish; season with salt and pepper, and spread a teacupful of cracker-crumbs over the top; cover the dish lightly, and bake in a quick oven from an hour to an hour and a half; just before taking from the oven add a few bits of butter. Slip the tomatoes out carefully, the brown side up, or serve them in the baking-dish.

Boiled Tomatoes.—Slice them and boil them in their own juice. They should boil gently, and

no longer than will suffice to cook them well; twenty minutes to a quart will be about right. Season with salt and pepper before serving.

Broiled Tomatoes. — Take nice "beef-steak" tomatoes, cut them in half cross-wise; broil them *over* the fire, skin side down, until brown; place the gridiron in *front* of the fire to brown the other side. Cook slowly until well done; season with pepper, salt, and butter; serve plain or on toast.

Canned Tomatoes.—Pour boiling water over ripe tomatoes; after a few moments pour it off; peel them carefully, removing the thick base of the stem; cut them in two and boil until cooked. Turn up an old wooden box by the range to hold the cans; it should be high enough to bring the glass cans in range with the kettle; have a silver fork in the can nearest the kettle; fill it from a pitcher dipped out of the boiling tomato; instantly remove the fork, screw the cover close. Repeat with each can. The fork saves the necessity of heating the cans. When cold, the covers will bear another turn. Make each one perfectly tight.

Raw Tomatoes.—Scald till the skins can be removed, cut them in thin slices with a sharp knife; lay in a salad dish, and season with pepper, salt, and vinegar, and, if liked, a little sugar. Stand them on ice before serving.

Scolloped Tomatoes.—Take fresh or canned tomatoes, 1 qt: butter, $\frac{1}{4}$ lb; bread-crumbs, $\frac{1}{2}$ lb; brown sugar, 2 oz; pepper, 1 teaspoonful; salt, 3 teaspoonfuls; onion (grated), 1. Put a layer of bread in a baking dish, then a layer of peeled, sliced tomatoes, and cover with bits of butter, a little of the onion, pepper, salt, and sugar; then another layer of bread, and so on, having the last layer of bread and leaving enough of the pepper, etc., to sprinkle over it. Bake canned tomatoes three-quarters of an hour, and fresh ones twice as long.

Stewed Tomatoes.—Scald and remove the skins from some fully ripe tomatoes, cut them into small pieces, and stew in a tin or porcelain sauce-pan for about half an hour; season with salt and pepper, and add a little butter and white sugar. When stewed tomatoes are to be *thickened*, use bread-crumbs.

Stuffed Tomatoes. — Squeeze with the hands some stale bread, saturated in cold water. Take six tomatoes, as nearly of a size as possible, cut off the top, and with a small spoon take out the inside and put it into a colander to let the liquid run off. Put about an ounce of butter into a sauce-pan, and when melted add a small onion, chopped fine; stir, and when nearly fried, add the parts of the tomatoes in the colander, also chopped; stir half a minute; put in the soaked bread, stir and mix; season with salt, pepper, and grated nutmeg; boil up once, and take from the fire. Fill the tomatoes with this mixture, dust with bread-crumbs, put a piece of butter on each, and bake in a quick oven. Before serving, wet them with a little tomato-sauce, broth, or gravy.

TOM-COD, or Frost Fish.—A small fish weighing usually from a half to three quarters of a pound, scaleless, but an excellent pan-fish, being very delicate and savory. Its color varies with the season, from a rich orange to a light greenish yellow, shaded to dark brown on the back. In season from September to April. Broil or fry as directed for MACKEREL.

TONGUE.—Beef's tongue, calf's tongue, lamb's and sheep's tongue, and pig's tongue, can all be procured of the butchers, and they are all prepared in the same way. Calf's tongue is considered best, but it is usually sold with the head; beeve's tongues are what is referred to generally when "tongue" is spoken of. Lambs' tongues are very nice. In purchasing tongues, choose those which are thick, firm, and have plenty of fat on the under side.

Boiled Tongue.—When taken fresh from the pickle, tongues require no soaking, unless they have remained in it much beyond the usual time, or have been cured with a more than common proportion of salt; but when they have been smoked and highly dried, they should be laid for two or three hours into cold, and as much longer into tepid water, before they are cooked; if extremely dry, ten or twelve hours must be allowed to soften them, and they should always be brought very slowly to boil. Two or three carrots and a large bunch of savory herbs, added after the scum is cleared off, will improve them. They should be simmered until they are extremely tender, when the skin will peel from them easily. A highly-dried tongue of moderate size will usually require from three and a half to four hours' boiling: an unsmoked one about an hour less; and for one which has not been salted at all a shorter time will suffice.

Pickled Tongue.—Tongues may be pickled in any of the pickles given for the beef (*See* BEEF); but the following is a better way. For each large tongue mix with half a pound of salt two ounces of saltpetre and three quarters of a pound of the coarsest sugar; rub the tongues daily, and turn them in the pickle for five weeks, when they will be ready for cooking or for being smoked.

Smoked Tongue.—Pickle as directed, and hang them in the chimney or smoke-house. The smoked tongues bought in the grocery stores are generally old and tough.

Stewed Tongue.—After the tongue has been soaked trimmed, and washed with extreme nicety, lay it in a vessel of fitting size, and place round it three or four pounds of the neck, or of any other lean cuttings of beef, with some bones of undressed veal, and pour in sufficient cold water to keep it covered until it is done: or, instead of this, use strong unseasoned beef broth made with the shin, and any odd bits or bones of veal which may be at hand. Let the tongue be brought to boil very gradually, that it may be plump and tender. Remove the scum when it first rises, and when it is quite cleared off add a large bunch of parsley, thyme, and winter savory, three carrots, a small onion, and ane mild turnip. After three hours and a half of gentle simmering, probe the tongue, and if sufficiently done peel off the skin and serve it

quickly. If not wanted hot for table, lay it upon a very clean board or table, and fasten it down to it by passing a carving-fork through the root, and a smaller one through the tip, drawing the tongue straight with the latter before it is fixed in the board; let it remain thus until it is quite cold.

TONICS.—A class of remedies used to give tone and strength to the system when debilitated by disease or otherwise. They are generally stimulants as well, inasmuch as they rouse the vital energies; but the excitement is not so rapid as in those called general stimulants, and the effect, also, is more permanent. No medicines require more tact in their selection, and in suiting them to the time when they are to be adopted, for it is far more easy to do harm than good in applying them. Thus, it is generally a rule that quinine will not be borne with a dry tongue, and yet in some cases of typhus fever, if the physician waits for this feature changing before giving quinine, he will wait until his patient is departed to the next world. Some tonics, as arsenic, which are very powerful, but easily misapplied, are omitted here altogether.

(*a*) Disulphate of quinine, 1 grain; diluted sulphuric acid, 3 minims; water, or infusion of roses, 1 ounce; tincture of orange-peel, 30 minims. Mix, and give twice or thrice a day.

(*b*) Tincture of cinchona (compound), 1 drachm; decoction of cinchona (yellow), 1½ ounce. Mix, and give two or three times a day.

(*c*) Nitro-muriatic acid, ten drops in a wine-glass of sweetened water after meals.

(*d*) Carbonate of iron, 1 drachm, twice a day, in neuralgia.

(*e*) Compound tincture of bark, 1 drachm; infusion of cascarilla, 1 ounce. Mix.

TONKA BEAN.—More properly *Tonga Bean*, or *Tonquin Bean*. This is the seed of a plant which is a native of Guiana. The aroma of the seed is owing to a volatile oil which it contains. It is used to scent snuff, and also to perfume clothes and keep away moths. Its efficacy for the latter purpose is very doubtful.

TOOTHACHE. (*See* TEETH.)

TOOTH-POWDERS.—The basis of most tooth-powders is prepared chalk, powdered bark, myrrh, Armenian bole, and orris-root. Prepared charcoal and camphorated chalk are also much used. Salt and alum are injurious to the teeth and gums. We append recipes:

I. A mixture of honey and very finely-powdered charcoal is an excellent tooth-powder.

II. *Camphorated Chalk. Take:*—Precipitated chalk, half a pound; powdered orris-root, a quarter of a pound; powdered camphor, two ounces. Powder the camphor in a mortar, by adding a little spirit, and sift the whole together.

III. *Take:*—Precipitated chalk, eight ounces; powdered cuttle-fish bone, one ounce; powdered orris-root, one ounce; white sugar, three ounces; rose oil, ten grains; carmine, No. 40, fifteen grains. Mix well together.

Tinctures for the Teeth. I. *Take:*—Florentine orris-root, eight ounces; bruised cloves, one ounce; ambergris, one scruple. Bruise the root, and put all the ingredients into a glass bottle, with a quart of rectified spirits of wine. Cork close, and agitate it once a day for a fortnight, keeping it in a warm place. In about a teaspoonful a soft tooth-brush should be dipped, and then work it into a lather on the teeth and gums. It cleanses the teeth, strengthens the gums, and sweetens the breath.

II. *Take:*—Tannic acid, one ounce; pellitory root, one ounce; orris-root, benzoic acid, and cinnamon bark, each one ounce; powdered borax, one dram and a half; soap-tree bark, eight ounces; alcohol, three pints; distilled water, five pints; cochineal, three drams. Digest six days and then add: White sugar, one pound; oil of winter-green, half an ounce; essence of peppermint, eight ounces. The last three articles should be rubbed together and added, then filter the whole.

TORTOISE.—This name is now restricted in ordinary use to the land-tortoise, which is never used as an article of food, but it is occasionally applied to certain species of the turtle tribe, such as the *painted tortoise*, which is a fresh-water turtle. Prepare, cook, and serve as directed for turtle.

TRAGACANTH.—A kind of gum obtained from a plant which grows in Asia Minor. It is allied to gum acacia. The gum exists in flakes, not easy to powder till well heated. Part of it is soluble in water, and this suspends the rest, so that it forms a thick tenacious mucilage, much denser than that formed by gum arabic. This mucilage is useful for suspending heavy powders, that would quickly settle in pure water. A compound powder, consisting of tragacanth, gum acacia, starch, and sugar, mixed with hot water, and allowed to cool, is useful for the same purpose.

TRAIN-OIL.—The oil drawn from the blubber or fat of the whale, and from the fat of various other fishes. Common train-oil or *Greenland oil* is the produce of the whale called *Baloena Mysticetus*. The oil is of a reddish or yellowish color, of a mucilaginous consistence, and when burned in common lamps gives out a strong unpleasant odor. It is seldom used for illuminating purposes, but is unequalled for softening and preserving leather, etc.

TRAPS, FOR DRAINS. (*See* DRAINAGE.)

TREACLE. (*See* MOLASSES.)

TREACLE-BEER. (*See* BEER—QUICK.)

TRICHINA SPIRALIS.—A genus of minute worms infesting in the adult state the intestinal canal, and in its larval state the muscular tissue of man and other animals, especially the hog. They are introduced into the human stomach by eating "measly" or imperfectly cooked pork, and in many cases cause death within a fortnight. Even where there is no fatal result, *trichinæ* are reproduced in the stomach in such vast numbers that the muscles (in which the cysts lodge themselves) have the appearance of being sanded. No treatment has any effect on *trichina spiralis*; prevention is in

this case the only cure, and no one should eat pork in any form without being certain that it has been thoroughly cooked throughout.

TRIFLES.—The art of whipping cream is little understood. Many cooks think they must whip the mass until it becomes like butter, and as sometimes this is not possible, of course they blame the cream. Even from rather poor cream a good whip may be produced, if the following simple directions are attended to:—put the cream into a good sized bowl, whisk for half a minute, when a little froth will rise; remove this on to a piece of muslin laid on a sieve, placed over a basin, whip again, and continue lightly skimming the froth from the cream as it rises. When you have enough, set the whip aside for some hours, or until the next day, if convenient. It will then have become solid, and the cream which has drained into the basin can be used to assist in making the custard for the trifle. A little sifted sugar and any flavoring can, if desired, be added to the cream before whipping; but it is not essential to the operation. Put at the bottom of a deep custard dish a layer of strawberry and raspberry jam, then one of macaroons, and another of sponge finger biscuits; pour over these sufficient brandy and sherry mixed to soak them, then a custard, made as for Soufflé, and lastly, pile the whipped cream on the top as high as you can.

Brandy Trifle.—An old-fashioned way of preparing this dish was to soak as much light sponge cake in as much good French brandy as it could absorb; then to stick it full of blanched almonds, cut into whole length spikes, and to pour a rich boiled custard around it. It is more usual now to pour white wine over the cake, or a mixture of wine and brandy. With this the juice of half a lemon is sometimes mixed.

Fruit Trifle.—Mix three dessert spoonfuls of arrowroot with a little cold milk; boil one pint of milk and half a pint of cream, sweeten and flavor it, and dissolve half an ounce of gelatine in it; pour in the arrowroot, and stir together well; wet a mould with cold water; put some dried fruit, or the driest preserve you have in the bottom of the mould, then the arrowroot mixture, then fruit, and so on till the mould is full.

Gooseberry and Apple Trifle.—Stew the gooseberries or apples till quite soft, strain, and make them very sweet. Put soft custard in the bottom of a deep dish, then the fruit, and then a whip to stand very high.

TRIPE. (*See* BEEF.)

TRIPOLI.—A silicious mineral, originally brought from Tripoli, much used in polishing metals, glass, marbles, etc. Its power of rubbing down most substances rapidly is very great, while its extreme fineness does not cause visible scratches. *Rotten Stone* is a variety of tripoli well known to housewives, and constantly used in cleaning. It is found near Albany, N. Y.

TRITURATION.—The process of reducing any substance to a very fine powder by rubbing or grinding with a pestle. It is usually done in mortars of agate, or some very hard material or on a slab of marble or prophyry, or thick ground glass. In some cases it is necessary to add a little spirit or other liquid during its trituration, to keep the powder from flying about.

TROUT.—There are several species of this favorite fish, the most common being the *brook* or *speckled trout*. Both the color and the quality of this fish depend largely upon the waters from which they are taken, the best being those taken from clear running streams

Brook Trout.

The flesh of brook trout is rather lighter in color than that of the salmon, and is considered by many to be superior to all other American fish. Brook trout are in season from March until August, during the greater part of which time they are quite plentiful. Their weight is from half a pound to four pounds; the sale of those smaller than half a pound is forbidden by law, and they are not often found weighing more than four pounds. The *lake trout* is a much larger fish. It is taken in most of the large fresh-water lakes of the Northern States, but is not often to be found in the markets. In season from October to March; weight from four to seven pounds. The *Mackinaw Trout* (or *Mackinaw Salmon*, as it is sometimes called) is the largest species known, often exceeding the true salmon in size. It is taken principally in the Great Northern Lakes, and is seldom found in eastern markets, except in a salted state. It is in season during the winter months; weight, from twelve to sixteen pounds, though occasionally much larger. For *Salmon Trout* (or *Sea Trout*), *See* SALMON.

Boiled Trout.—Trout are sometimes cooked in this way, and it is probably the best way to cook large ones. Put a couple of large ones in enough salted water to cover them, and boil them gently till done; garnish with sliced lemon, and serve with drawn butter, or, if preferred, egg sauce, or some piquant sauce.

Broiled Trout.—Clean, wash, and dry the fish; slit down the back, and broil on a buttered gridiron over a brisk fire; when done, dish, season slightly with salt, and spread pretty freely with butter. Pepper is not an improvement to this fish.

Fried Trout.—Clean and wash the fish and dry them on a towel; roll lightly in flour, and fry to a delicate brown in hot butter, or butter and lard, or lard alone. When dished, season slightly with salt only. Send to table as free from grease as possible, and on a hot dish.

Stewed Trout.—Cut the fish into moderate sized pieces, lay them in a stewpan with a little water, butter, and a few bits of salt pork, and stew gently for half an hour.

TRUFFLES.—The fungi so called, which play so large and conspicuous a part in Eu-

ropean cookery, are not grown in this country, and the few found here in a fresh state are brought over in the European steamers. The *dried* truffles are devoid of flavor, and almost entirely useless. Those preserved in oil, or in their own liquor, and packed in air-tight bottles, are excellent; but even these are but little known here. The external appearance of the truffle is even less inviting than that of mushrooms in general, being almost black, with a rough, ridgy, and warty surface. The flesh is white and firm, and the taste, which is quite savory, resembles that of the almond or walnut, and improves all it touches in cookery.

TRUSS. — Trusses are mechanical contrivances for the support or for the prevention of the protrusion of any viscus, but most usually for the support of the parts concerned in abdominal rupture or hernia. If a hernial protrusion occurs in either sex, it should be advised that mechanical treatment be adopted at once; for no matter whether in infancy, youth, or middle age, judiciously applied trusses frequently effect a cure, without further surgical interference, and at all events cause but little trouble or annoyance. A surgeon should always be consulted as to the form of truss needed, and should himself take the necessary measurements, and himself apply the apparatus in the first instance. It is a great mistake, and one productive of the worst results, to leave the advice regarding a truss to an instrument-maker, and we often see instances, especially among the poor, of ill-fitting, ill-shaped contrivances, which not only do no good at all, but in many cases do absolute harm, by increasing the mischief they are designed to alleviate. A truss should be firm, light, and elastic, and preserve its shape, and the strength of the spring should always be equable, so that it may retain the rupture without irksomeness. A truss consists essentially of a pad attached to a metal spring, having straps so arranged that it may be kept in the desired position in any of the various movements of the body. There are many different forms, whether single or double, named after their inventors. The following hints on trusses are of value, as the experience of an authority on the matter:—

"In the majority of cases, the circular spring truss is the best form. The curve of the spring and the relative position of the pad with it should be appropriate to the configuration of the wearer. A single piece of metal should form the spring and the foundation of the pad. As far as practicable the spring of the truss should pass around the bony rim of the pelvis, fitting closely to the figure, and should lie out of the region of the great muscles of the buttock (*glutæi*). The form of the spring may be designed after the French model or the German. The former resembles the coil of a watch-spring, and is very elastic and clinging; the latter almost exactly fits the outline of the body in its state of repose: it is almost inelastic, and very hard. The French is always pressing inwards, even when the wearer is at rest; the German scarcely presses at all when the abdomen is soft, but resists with power when any expulsive force makes the abdomen swell. The best shape for the spring is one which forms a medium between the two. The pad should be of moderate dimensions. For the adult it should not exceed two and a half inches in length and two inches at the widest part. Its superior edge should follow the upper line of the spring, which falls a little from the shoulder or bend, where it lies in contact with the hip. The inner surface should be directed slightly upwards. The proper shape for the pad, and the materials of which it should be constructed, may be varied to accommodate particular cases. The wearer generally discovers after awhile which kind of pad is most free from annoyance; that pad, however, is the best which retains perfect and unintermitting retention of the hernia. Every pad should have attached to it two studs, one near its junction with the spring, and another at its lowest point. To the upper one the transverse strap, passing from the free end of the spring, is attached; the lower stud is used with the high strap, which should be always worn. It is loosely fastened on to the spring of the truss near its shoulder, and should fall along the hollow beneath the buttock. In the erect posture of the wearer this strap should be moderately tight; it prevents the pad from shifting, and should never be discarded." The pad may be prevented from fretting the skin by covering it with fur, or by the interposition of some soft substance.

Trusses for ventral, umbilical, and femoral hernia, are also constructed. In the case of crural or femoral hernia "the spring should fall somewhat suddenly from the point where it passes round the hip, and lie along the fold of the groin (Poupart's ligament). The pad should be rather small and convex. The cross strap should fasten high up on to the shoulder of the spring, in order to keep the pad well down on the thigh. The thigh strap should start from near the pad, and return, after encircling the thigh, to the pad itself." In large hernia, or those which have become irreducible, a bag truss is indispensable. Trusses are also in use for the support of the prolapse of the womb or rectum, and constructed of various forms by different makers. (*See* HERNIA.)

TRUSSING.—This is an art which can hardly be taught by words, and though we shall make the following directions as explicit as possible, we would recommend that, instead of relying on any written instructions, persons who really desire thoroughly to understand the subject should apply for a few *practical* lessons to some experienced and skilful cook. The knowledge is important enough to justify any amount of trouble in gaining it, for without it, it is impossible to serve up poultry or game creditably.

Before a bird can be trussed, the skin must be entirely freed from any down which may be upon it, and from all the stubble-ends of the

feathers; the hair also must be singed from it with lighted writing-paper, care being taken not to smoke nor blacken it in the operation. Directions for cleaning the insides of birds after they are drawn, are given in the receipts for cooking them.

Chickens, turkeys, geese, ducks, wild or tame, and pigeons, should have the heads taken off close to the bodies; but not the skin of the necks, which should be left sufficiently long to turn down upon the backs for a couple of inches or more, where it must be secured, either with a needle and coarse soft cotton, or by the pinions of the bird when trussed.

For boiling, all poultry or other birds must have the feet drawn off at the first joint of the leg. The skin must then be loosened with the finger entirely from the legs, which must be pushed back into the body, and the small ends tucked quite under the apron, so as to be entirely out of sight.

The wings of chickens, fowls, turkeys and pigeons, are left on entire, whether for roasting or boiling. From geese, ducks, pheasants, partridges, grouse, woodcocks, snipe, wild fowl of all kinds, and all small birds, the first two joints are taken off, leaving one joint on, thus:—

The feet are left on ducks, and upon roast fowls, pheasants, black and moor-game, pigeons, woodcocks, and snipes. The thick coarse skin of the legs of these must be stripped, or rubbed off with a hard cloth after they have been held in boiling water or over a clear fire for a few minutes. The sharp talons must be pulled out, and the nails clipped. The toes of the pigeons for roasting should be cut off.

Geese, sucking-pigs, hares, and rabbits, have the feet taken off at the first joint.

The livers and gizzards are served in the wings of roast turkeys and chickens only.

The heads are still commonly left on pheasants, partridges, and grouse; but the fashion is declining.

Poultry and birds in general, except perhaps quite the larger kinds, are more easily trussed into plump handsome form with twine and needles made for the purpose than with skewers. The manner in which the legs and wings are confined is much the same for all; the principal difference being in the arrangement of the former for boiling, which has already been explained.

There is a present mode of trussing very large fowls for boiling or stewing which, to our taste, is more novel than attractive. The feet are left on, and after the skin has been loosened from them in every part, the legs are thrust entirely into the body by means of a slight incision made in the skin just above the first joint on the underside; the feet then appear almost as if growing out of the sides of the breast: the effect of this is not pleasing.

To truss a chicken, turkey, grouse, or partridge for roasting:—First draw the skin of the neck down over the back, and secure it from slipping up; then thread a trussing needle of convenient size* for the occasion with packthread or small twine (the former, from being the most flexible, is best); pass it through the pinion of the bird, then through the thick part of the thigh, which must be brought up close *under the wing*, and in a straight line quite through the body, and through the leg and pinion on the other side; draw them close, and bring the needle back, passing it through the thick part of the leg, and through the second joint of the pinion, should it be left on the bird; tie it quite tight; and then to secure the legs, pierce the sidebone and carry the twine over the legs, then pass the needle through the other sidebone, and tie them close down. If skewers be used, they should be driven through the pinions and the legs, and a twine passed across the back of the bird, and caught over the points of it, and then tied in the centre of the back: this is only needful when the trussing of the bird is not firm.

When the head is left on a bird, it may be trussed in the same way, and the head brought round, as shown here, and kept in place by a skewer passed through it, and run through the body. When the bird is trussed entirely with skewers, the point of one is brought from the other side, through the pinions and the thighs, and the head is fixed upon it. The legs are then pressed as much as possible under the breast,

Partridge.

between it and the sidebones, where they are lettered *a b*. The partridge in the engraving is shown with the skewers just withdrawn after being roasted.

Trussing Needles.

Hares, after being filled with forcemeat and sewn or securely fastened up with skewers, are brought into proper roasting form by having the head fixed between the shoulders, and either fastened to the back by means of a long skewer, run through the head quite into it, or by passing one through the upper part of the

* These may be had, of various sizes, at any good house-furnishing store.

shoulders and the neck together, which will keep it equally well in place, though less thrown back. The fore-legs are then laid straight along the sides of the hare, and a skewer is thrust through them both and the body at the same time; the sinews are just cut through under the hind legs, and they are brought forward as much as possible, and skewered in the same manner as the others. A string is then thrown across under the hare and over the points of both skewers, being crossed before it is passed over the second, and then tied above the back. The ears of a hare are left on; those of a rabbit, which is trussed in the same way, are taken off. (*See* RABBIT.)

Joints of meat require but little arrangement, either for the spit or for boiling. A fillet of veal must have the flap, or part to which the fat adheres, drawn closely round the outside, and be skewered or bound firmly into good shape: this will apply equally to a round of beef. The skin or flank of loins of meat must be wrapped over the ends of the bones, and skewered on the underside. *The cook should be particularly careful to separate the joints when it has not been done by the butcher*, and necks of veal and mutton also, or much trouble will be caused for the carver.

Salmon, pike, pickerel, and some few other large fish, are occasionally trussed in the form of an S by passing a string through the head, and tying it securely, then through the centre of the body, and next round the tail, which should be turned the reverse way of the head, and the whole should then be drawn closely together and fastened. Whitings and other small fish are trussed with the tails merely skewered into their mouths.

TUBEROSE.— One of the most beautiful of the summer flowering bulbs, and unequalled in fragrance by any flower that grows. The bulbs never bloom but once, but numerous small offsets form around the parent root, which, if kept during the winter in a dry place where the temperature is never less than fifty degrees, will bloom in two years. Our climate, however, is too uncertain to insure a proper ripening of the bulbs; and it is best to throw away those that have bloomed and procure fresh ones each spring. The price of the bulbs in the seed-stores is a dollar and a half a dozen; they may be imported, however, for two dollars and fifty cents a hundred, costing, with charges, about three cents each. Tuberoses bloom best in a sandy soil, well enriched with con centrated manures; guano water, prepared by dissolving a tablespoonful of guano in a gallon of warm water, will hasten their flowering and increase the number of buds. It may be given twice a week, if the bulbs are in the open ground or in large boxes. In latitudes north of New York city, the bulbs must be started early in March, in order to bloom before the fir t frost touches them. By a succession of plantings (a fortnight apart) and the use of concentrated manures and plenty of water, a long season of bloom may be secured.

The *double* Tuberose is considered the most desirable flower, but the single possesses the same delicious perfume, and blooms earlier. A new variety, with variegated leaves striped with light yellow, is admired for its novelty.

TULIP.—This bulbous plant is the most gorgeous of the spring flowers, and though the "tulip mania" which attained such ridiculous dimensions about the beginning of the eighteenth century, has long ago died out, it is still one of the most highly esteemed of the floral tribe. It blooms at a time of the year when few other flowers are to be seen, and it is so easy of culture that no garden should be without a bed of them. Tulips are divided into three classes: Bizards or Bizarres, having a yellow ground, broken with purple or red; Rose, which have a white ground, broken with cherry color; and Bybloemens, which are white, broken with purple. These classes are subdivided into flamed and feathered, the former being those which are somewhat striped, the latter those which are only broadly marked on the edge.

The best soil for growing tulips is a fresh sandy loam, such as is obtained from upland pastures; remove the sod from sheep or cow pastures, and take the virgin soil. Good garden soil, mixed with cow manure at least two years old, and a plentiful sprinkling of sand, will grow them to advantage. Never put fresh manure near them; it will burn up the bulbs. The bulbs should be planted in late October or November, setting them firmly in the soil, six inches apart and four inches deep for the tall varieties, and four inches apart and three inches deep for the "Van Thols." Sprinkle sand into each hole before setting the bulb in; this will keep them from rotting at the base. After the ground freezes, cover with straw or leaves. When the leaves of the flowers fall, cut off the stems, and when the leaves are dried up, dig up the bulbs, separate the offsets, and lay them on a shelf, with the root end uppermost, to dry. When the fibrous roots are sufficiently withered to be rubbed off, the bulbs may be placed in drawers or boxes, and kept dry until the season for planting again arrives.

Of the several varieties of Tulip the *Duc Van Thol* is a very early kind, blossoming in temperate climates early in March. It is a dwarf, the stems not being over six inches high; and it is excellent for indoor culture. There are white, red, scarlet, yellow, rose, and striped varieties; they are perfectly hardy, but will bloom better if taken up every spring as directed above. The *Tournesol* comes into bloom next after the Van Thols; it is double, and only in two kinds, the red and yellow, and the pure yellow. In mixed beds they are very gorgeous.

Double Tulips.—These are growing in favor; their flowers are very large and brilliant. Desirable varieties are: *Amsterdam*, brown and red curiously blended, late; *Belle Alliance*, white, striped and feathered with violet; *Crown of Roses*, rich rose color; *Gloria Mundi*, delicate primrose, striped with crimson; *La Can-*

deur, pure white; *Lord Wellington*, blue, late; *Marriage de ma Fille*, pure white striped with cerise, late; *Paeony Gold*, yellow, beautifully shaded, late; *Poupre Agreeable*, white and violet, late.

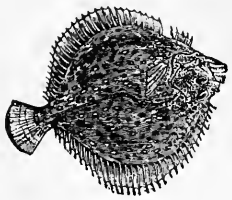
Parrot Tulips.—These are the most curious and unique of all. The flowers are magnificently striped and feathered, with many colors, most picturesquely mingled, while the edges of the sepals are fringed like fretted lace work. The most distinct varieties are: *Belle Jaune*, large yellow, feathered with red and green; *Constantinople*, bright yellow and red; *Glorieuse*, brilliant scarlet; *Markgraf*, striped red and yellow; *Monstre Rouge*, crimson, large.

TUMORS.—Tumors are divided by medical writers into two groups; one of innocent or benign growths, the other of malignant growths. The latter are distinguished by the following common characters: rapidity of growth, tendency to infiltrate and to replace the tissues of the affected part, tendency to recur after removal by operation, tendency to multiply locally and to infect other and remote parts of the body, and a tendency to destructive and progressive ulceration, causing fatal exhaustion through pain and loss of blood. To any tumor presenting these so-called characters of malignancy, the term cancer was formerly applied; but at the present time, in consequence of the extensive use of the microscope in pathological research, there is a tendency to classify tumors with regard more to minute structure than to general symptoms. Innocent or benign tumors may occur in almost any part of the body, and they may vary in character from so simple a growth as a wart up to formations which may endanger life or require some serious surgical operation for their removal.

It would be useless to attempt, in a work like this, any systematic classification of tumors, as it could not be made intelligible to the unprofessional reader. The important question, when one finds a tumor is forming, is as to whether it is of a cancerous nature or not, and this can only be answered by a competent physician. The great majority of small tumors are harmless in character, and often cause inconvenience rather than any other distress; but in all cases it is well to have medical advice before any treatment is ventured upon. (*See* CANCER.)

TUNNY-FISH.—This large fish, which is also called *horse mackerel*, is one of the mackerel family and has much the form of the common mackerel. The back is of a grayish-black color, sides bright and silvery, and belly nearly white. The mouth is quite black inside. Like all the very large fish, such as halibut and sturgeon, the tunny is sold cut up in pieces; the middle cuts are best. The flesh is considered good, but it is lacking in flavor. Prepare, cook, and serve as directed for HALIBUT.

TURBOT.—It has been generally believed that we have none of this fish, so highly esteemed in England, in American waters, though numerous fishermen and others have at different times declared that they have either caught or seen it at various points on the New England coast. At any rate it is never found in our markets, and may be said to be practically unknown to American tables. The flat-fish sometimes called *spotted turbot* is nothing more than what is more generally known as New York *plaice*.



Turbot.

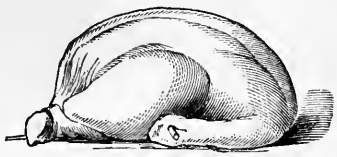
TURKEY.—This most popular of the poultry tribe is found in our markets during the greater part of the year, but the best season for it is in the fall and winter months, when the young ones are about fully grown. The young *hen* turkey, when large enough for the purpose, is considered best, being plumper and generally fatter than the male; but a young male is preferable to an old hen. In buying turkeys, bear the following facts in mind. The legs of a young hen turkey are black; the cock also has black legs, but he is provided with small spurs. An old hen has red and rough legs; an old cock's legs are very rough and the spurs long. The fatter turkeys are the better; they cannot be too fat. The breast should be broad and the skin white. The bird is fresh enough as long as the legs are not stiff.

Wild Turkeys are in season in the months of November, December and January, but are in the best condition in January. Their flesh is darker, more succulent, and at the same time more delicate than that of the tame turkey, and is unsurpassed by that of any other game bird. They are sent to the Eastern markets from Pennsylvania and from further West, in a frozen state; they are generally sold with all their feathers on. Their usual weight is from nine to twenty pounds. Wild turkey is prepared and served in exactly the same manner as the tame.

Baked Turkey.—When cleaned, stuffed, and trussed, put the turkey in a baking-pan, with a little cold water in the bottom, spread some butter over it, sprinkle salt all over, cover with a piece of buttered paper, and set in a quick oven; baste often, and turn the bird over and around if necessary. It takes from an hour and a half to two hours to bake a turkey. It is served with the gravy only, after having removed the fat, or with cranberry sauce, or currant jelly.

Boiled Turkey.—An old turkey will answer for this, though a young hen is better. After drawing, wash the inside exceedingly clean, wipe it dry on a towel, and fill the breast with bread-crumb, chestnut or oyster stuffing, receipts for which are given under STUFFINGS. In trussing it draw the legs into the body, break the breast-bone, and give the bird as round and plump an appearance as possible. Put it into plenty of warm water, or into as much boiling water as will rise an inch above it, and when it has boiled ten minutes, cool it down by the ad-

dition of cold water, and then take out a portion of it, leaving only as much as will keep the bird entirely covered until it is ready for



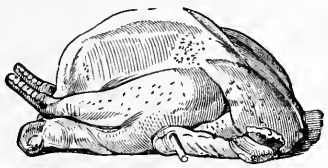
Turkey Trussed for Boiling.

table. Clear off the scum carefully as it rises to the surface, and boil the bird *very gently* from an hour and a half to two hours and a quarter, according to size. When oyster stuffing is used, a large tureen of rich oyster-sauce should be served with it; but celery sauce, or good white sauce or chopped parsley in drawn butter, will answer otherwise.

Boned Turkey.—For directions how to bone Turkey, *see* BONED FOWL.

Ragout of Turkey.—Cut the cold turkey that is left over from a roast or boil into bits an inch long. Put into a saucepan the gravy left from the roast, adding a little water if the quantity be small; add a tablespoonful of butter, a teaspoonful of some pungent sauce, half a teaspoonful of cloves, a little grated nutmeg, and a little salt; when it boils up, put in the meat; stew very gently for ten minutes, and then stir in a tablespoonful of cranberry or currant jelly, a teaspoonful of browned flour wet in a little cold water, and a wineglassful of sherry or Madeira; boil up once, and serve in a covered dish. A ragout without spice, jelly, or wine, is generally preferred.

Roast Turkey.—In very cold weather a turkey in its feathers will hang for a fortnight with advantage. Pluck, draw, and singe very carefully; wash, and then dry it thoroughly with clean cloths; fill with common bread-crumb stuffing, or with sausage-meat, or chestnuts (*See* STUFFING); truss firmly, and lay



Turkey Trussed for Roasting.

the bird before a clear hot fire; roast from an hour and a half to two hours, basting constantly and bountifully with butter. Serve with its own gravy and cranberry sauce.

A turkey should be laid at first far from the fire, and drawn nearer when half done, though never sufficiently near to scorch it. It is usual to fold and fasten a sheet of buttered writing paper over the breast to prevent its being too much browned; this should be removed twenty minutes before the bird is done.

Stewed Turkey.—An old turkey is more tender stewed than when cooked in any other way. Put into a large pot half a pound of bacon cut in slices, a quarter of a pound of knuckle of veal, three sprigs of parsley, two of thyme, six small onions, one carrot cut in small pieces, three cloves, salt and pepper, and then the turkey; add a pint each of broth and white wine, cover as closely as possible, and simmer gently about two hours and a half; then turn the turkey over, and put it back on the fire for another two hours and a half; dish the turkey; strain the sauce, put it back on the fire, and after reducing it to a glaze spread it over the turkey and serve. Some prefer stewed turkey when cold.

TURKISH BATH.—The Turkish bath, as commonly given in this country, consists in placing the bather in an apartment heated by stoves or steam pipes to a temperature of 110° to 125°; in a short time, as soon as the pores of the skin begin to open and perspiration appears, the bather passes into a still hotter chamber, where there is a temperature of from 140° to 200°, and where he remains until profuse perspiration is induced. He then passes into a wash-room having a reduced temperature, where his whole body is shampooed, then washed and scrubbed with soap and warm water, and then cooled with the spray bath; he then plunges into a swimming-bath at the ordinary atmospheric temperature, which completes the ablutions. He is then properly dried, enveloped in a dry sheet, and conducted to the cooling-room, where, wrapped in a blanket, he reclines until his body is thoroughly dry and brought to its normal temperature.

When we consider that the skin contains no less than seven million pores, designed to assist the several secretive organs in discharging refuse matter from the system, some idea may be formed of the vast importance of keeping it in a perfectly healthy state; and the fact that the Turkish bath contributes very largely to this renders it a hygienic agent of the first order. There is no doubt also that in all diseases caused by obstruction or impairment of the functions of the secretive organs, the bath is a most useful remedy; while in sub-acute rheumatism and other rheumatic affections, in colds, influenza, catarrh, etc., it is recognized as a specific. As to the advantages and general physiological effect of the Turkish bath, we cannot do better than quote from a work to which we have already referred more than once—Hinton's "Physiology for Practical Use."

"The Turkish bath," he says, "has its chief use as a means of thorough cleansing. Not, indeed, that by it, as some of its too enthusiastic advocates have implied, every kind of morbid agent can be washed out of the blood. Diseases cannot be filtered away through the sweat-glands. Still, by the profuse perspiration which the high temperature induces, aided by the drinking of a few tumblers of water, a great deal of highly objectionable matter may

be got rid of. Persons with weak hearts should be careful how they have recourse to the Turkish bath, although in some cases, under careful medical supervision, persons suffering from confirmed heart-disease have derived the greatest benefit from its use. But for all other persons an occasional recourse to it is a legitimate luxury, and for some a decided advantage. The temperature of the heated air, however, should not exceed 150°, except under medical advice, or after careful trial. If exhilaration and a feeling of increased lightness and proneness to exertion follow, benefit has been gained; if lassitude and exhaustion, the bath is unsuitable, or its duration or temperature should be diminished.

"The free perspiration induced by the Turkish bath, judiciously taken, is in some cases beneficial; but it should not be supposed that there is any special virtue in this means of inducing it. Active exercise is a better one for all persons who can take it; and a walk or a game, which within the bounds of moderate fatigue produces a copious secretion from the skin, and on which no chill is allowed to supervene, does fully as much to eliminate ill materials from the blood as the most sedulous votary of the Turkish bath can attain. The latter, indeed, regarded as a means of health, may be looked upon most justly as a kind of substitute for bodily exertion when this is unattainable through lack of strength or time; a substitute, that is, in this one respect, but by no means in all, for exercise does much more for us than merely carrying off fluid through the skin. The Turkish bath, accordingly, is most suitable for those who, from unavoidable causes, are compelled to lead sedentary lives, especially if they suffer from want of activity of the secreting organs. To them it affords a partial supplement for more natural and effective sources of invigoration. It is useful also for those to whom the free use of cold water without previous warmth is too severe a shock, the high temperature drawing the blood freely to the surface of the body, and so preparing it to receive with advantage the cold affusion with which the bath concludes. For the principle on which cold succeeds warmth in the Turkish bath—and it is one which all bathers should bear in mind, as it determines whether the practice is beneficial or the reverse—is this, that the circulation in the skin should be vigorous, and the temperature accordingly warm, so that the temporary depression from the cold may be followed by a vigorous reaction."

In another part of the work he adds that "perhaps no means of hardening the body against taking cold is more valuable than the hot-air or Turkish bath. We have found this practical in numerous cases. Nor is it difficult to understand how this is effected. The apertures of the sweat-pores are thrown open by the high temperature of the bath, and while in this condition are suddenly, but only for the instant, closed by the cold water douche with which the process of the bath ends. A bracing effect is by this means produced in the skin and its pores, by which the tendency to a more permanent contraction is prevented."

TURNIP.—This is one of the most easily cultivated of vegetables, as it will thrive in almost any soil, whether of the garden or field. Those for table use are best when grown in moderately rich and dry garden soil; the seed should be sown in the early spring in rows about eighteen inches apart and half an inch deep. The *Red Top Strap leaved* and the *White Strap leaved* are the best white-fleshed turnips, either for early summer or winter use. Among the yellow-fleshed, *Robertson's Golden Ball* and *Early Yellow Finland* are the finest grained and most delicately flavored. The *Ruta-baga* or Swedish turnip is excellent for winter use. Middle-sized turnips are best for the table, as the larger ones are apt to be spongy. The season for *new* turnips commences about the 1st of June, and continues with the different varieties throughout the year. The tops of the Ruta-baga turnips, when quite young, make excellent greens.

Boiled Turnips.—Pare the fibrous rind entirely away from them, and either split them once or leave them whole; throw them into boiling water, slightly salted, and keep them closely covered till they are tender. When small and young they will be done in from fifteen to twenty minutes; old and large ones will require from three-quarters to a full hour of gentle boiling. When boiled in their skins and pared afterwards, turnips are said to be of better flavor, and much less watery than when cooked in the usual way.

Mashed Turnips.—Pare them; cut into thin slices and cover (twice their depth) with cold water; cover the kettle, and boil the turnips as quickly as possible, to prevent their changing color. To ensure their being free from lumps it is better to press them through a colander or coarse hair sieve with a wooden spoon; though, when quite young, they may be worked sufficiently smooth without this. Put them into a saucepan and stir them constantly on a slow fire, that they may be thoroughly dry; then add some salt, a bit of butter, and a little cream or new milk, and continue to simmer and stir them for five minutes longer, or until they have quite absorbed all the liquid that has been poured to them. Serve them always as hot as possible.

Stewed in Butter.—This is an excellent way of preparing turnips, when they are mild and finely grained; but their flavor otherwise is too strong to be agreeable. After paring them as above, cut them into slices nearly half an inch thick, and divide these into dice. Put an ounce of butter for each half pound of the turnips into a stewing pan, and when it is melted lay them in as flat as possible, and stew them *very* gently from three-quarters of an hour to an hour; add a seasoning of salt and white pepper when they are half done. When thus prepared they may be dished in the centre of fried or broiled mutton chops, or served by themselves.

TURPENTINE.—A mixture of oil and

resin exuding from the pine, especially from the yellow pine of the Southern States. From this exudation oil of turpentine is distilled: the dry substance remaining is resin. Turpentine is a valuable remedy, used both internally and externally. Applied to the skin, it is a powerful stimulant, acting like mustard. As a counter irritant in diseases of the bowels, sprinkle a small quantity upon a flannel cloth, wrung out in hot water. It enters into soap liniment, and is also used on burns, scalds, and the like. If retained it speedily causes tape worm to be expelled dead. As a stimulant and diuretic, the dose is from half a dram to a dram; for tape worms, half an ounce. Only take under physician's advice.

TURTLE.—*Green turtle* is the most highly esteemed. The flesh is of three colors, the dark red being called beef, a lighter part veal, and the lightest of all, lamb. The fat is greenish in color. Steaks are taken from the forequarter. In preparing, hang up by the hind fins, and cut off the head; five or six hours afterwards take down, and carefully cut off both shells; then remove the viscera, and cut up as desired. Green turtles from the West Indies, Florida, etc., are in market from May to cold weather, and occasionally in winter. The "terrapin" of the salt marshes of the lower, middle and upper Southern States is the epicure's delight in Philadelphia, Baltimore and Washington. It weighs from three to eight pounds, and is sold by "counts," a count meaning three inches breadth of the lower shell, those under that measure sell two as one. Several species of turtles are sold as terrapin, but the dark-shelled "diamond-back" is the genuine, though some declare the others to be just as good.

The *soft-shelled turtle* is also very highly esteemed. It has a dark slate-colored shell, with numerous spots on it, the head, neck, feet, and tail are variegated with white and black. A small, fat, *logger-head turtle* makes tolerable soup. The ordinary *snapping turtle*, weighing from two to five pounds, is very nutritious and savory; the larger ones have generally a strong musky flavor. The *fresh-water turtles* found in ponds and rivers, are very good. The female of all turtles is preferred on account of the eggs she generally carries.

Terrapin (and we presume turtles generally) can be kept in the cellar for weeks without food. Being "cold-blooded," they require no heat-making sustenance, and as they lie nearly torpid, they waste no muscle. It is said that a turtle has some odor which will keep a cellar free from rats or mice.

Dried Turtle, put up in the West Indies, may be had at the leading groceries. Properly handled, it makes almost as good a soup as the fresh turtle, and is very much more economical.

Soup (Turtle). (*See* SOUPS.)

Steaks (Turtle).—Cooked like beef-steak.

Stewed Turtle, or Terrapin. *Recipe* **I.** *From Baltimore.*—Drop two full-sized terrapins into boiling water, with a little salt, boil until the upper shell will readily come off, which takes about an hour. Remove it very carefully, take out the gall without breaking it (it is imbedded in one of the livers), and the sand-bag and the intestines if desired, though some consider them quite equal to the flesh. Pick up the meat in small pieces, being careful to leave in all the bones. Save the juice and place it on the fire in a saucepan; if not sufficient in itself for the sauce, add boiling water. Put in the terrapin, and when thoroughly heated add a quarter of a pound of fresh butter, creamed with one tablespoonful of plain flour and one of browned flour; salt and pepper to taste, and put in half a teaspoonful of ground clove. Boil the whole about ten minutes, stirring to prevent scorching. Before removing from the pan stir in a gill of good sherry, or port wine. Most persons, not living near its native haunts, ruin terrapin by adding too many things, which detract from the flavor.

Recipe **II.** *From Philadelphia.*—Boil and prepare the meat as above. One gall bag used to three or four terrapins may improve the flavor.* Clean the entrails and break them in inch pieces. To each full sized terrapin take one quarter pound of butter, and rub it with one tablespoonful of flour, the yolk of an egg, half boiled, and one wineglass of cream. You may add now the salt, pepper, cloves, mace, nutmeg, cayenne and mushroom catsup. But some prefer salt and cayenne pepper only: Just add as you serve one wineglassful of sherry, port, or claret. These articles all being in your saucepan or chafing dish, let them boil quietly for a few moments; a slice of a lemon is sometimes added. If you need more gravy than is produced by the pieces of the terrapin in cutting up, throw back the shells into the water and boil longer; the water can be used as a stock, and is very gelatinous.

TUTTI-FRUTTI.—Ice-cream with small fruits (either preserved or fresh) frozen in it. Sponge cake and candied chestnuts are sometimes added.

TWEED.—A woollen fabric of light substance, lately much used for summer clothing. It is a yard wide, and should be shrunk before cutting.

TWILL.—A variety of cloth in which a kind of diagonal ribbed appearance is produced on the surface. It is of wool or silk, the former being employed for gentlemen's clothing, and the latter chiefly for linings.

TYPHOID FEVER.—A continued infectious fever, caused, according to present views, chiefly by defective drains, neglected privies, and sewer gas, lasting an uncertain period of from four to six weeks, and sometimes followed by a relapse. The exciting causes are contagion and spontaneous degenerations. Those nursing the sick from this disease sometimes catch it, but probably from the emanations of the excrement or clothing.

* But the editor would not like to try it, although the recipe came from high authority.

Whenever any drainage soaks from the surface into a well used for drinking purposes, or when sewer gas escapes into the house by a leaky pipe, or when the traps are out of order, or when one drinks foul and stagnant water, into which any drainage from manure can enter, then arise the conditions which excite the disease.

Symptoms.—The onset of typhoid fever is always very gradual and insidious; it begins with feeling out of sorts, aching pains in the limbs, headache, loss of appetite, and chilliness; for many days the sufferer is able to go about and think that there is not much the matter. Sometimes there is diarrhœa, or some intestinal disturbance, then the pulse is quicker, the skin hot, and the tongue red and dry. The nights are disturbed and restless, and he does not care for any exertion. At the end of the first week, or often later, he takes to his bed, and it is found that he is feverish, has no appetite, is thirsty, and his bowels are generally relaxed. The urine is scanty and high-colored; there is still more restlessness at night; there is no stupid, heavy expression as in typhus, nor are the eyes suffused; on the contrary, the face is often pale and the cheeks have a pink flush, and the eyes are clear and bright. Between the seventh and the twelfth day the peculiar eruption appears on the chest, abdomen, and back, and it consists of a few slightly-raised, rose-colored spots, which disappear on pressure under the finger and fade away in two or three days, but in the meantime others appear, so that several crops are noticed, and fresh ones may be seen every day. If now the hand is pressed over the right side of the abdomen there may be a feeling or expression of pain, and one may also feel a gurgling under the fingers. About the middle of the second week delirium comes on, at first slight and only noticed at night, and then more constant, intense, and noisy. The tongue is dry, red, and glazed, and often cracked in various directions; in children, however, it may sometimes remain moist and white the whole time, and in very young cases also you do not always see any rash at all. As the disease advances the patient loses flesh and strength; he lies prostrate and perhaps unconscious of what is going on around, and if it end fatally, he will become quite insensible, have a markedly high temperature, and fumble at the bed clothes. If the disease progress favorably the amendment is very gradual, and for this the temperature is a pretty good guide. The temperature rises from the first, but not so suddenly as in typhus and relapsing fevers; at the end of the first week it may be 104° or 105°, being generally highest towards evening; it keeps high with slight oscillations for about twenty-one days, and then a fall may often be noticed in the morning, although it ascends again at night, and these daily variations are very marked and may cover three or four degrees; at about the thirtieth day, or a little later, the symptoms are decidedly less severe in ordinary cases; the tongue cleans; there is less prostration and delirium, and a general improvement is manifested. But then a relapse may ensue, and the temperature will again rise, and the patient go through a second attack, but this is much shorter than the first.

Complications.—Typhoid fever is a very dangerous disease, because there are so many accidents to which patients are liable. Diarrhœa may be very profuse and exhaust the patient, but as a rule diarrhœa is not a very bad symptom, and should be left alone, unless very profuse. Bleeding from the bowels, when it occurs in any large quantity, is a very dangerous sign; it is due to the ulceration of the intestines. Bleeding from the nose is not often a bad symptom. Perforation of the bowel is very likely to occur between the twenty-fifth and thirty-second day, and even later, and this may be brought on by an error of diet; it is attended by collapse and is very fatal. Inflammation of the peritoneum, either with or without perforation, adds greatly to the danger. Bronchitis and pneumonia may supervene and increase the general mischief. Some cases are very mild, others very severe, and there is, perhaps, no fever which varies more in its forms, nor about which so much anxiety and uncertainty must exist with regard to a successful issue, nor is one safe till recovery is fully established. In many cases it is most difficult to be certain of the nature of the case in the first week. It is most likely to be mistaken in children for acute tuberculosis; or it may be looked upon as the so-called gastric fever or gastric irritation; or it may resemble the symptoms of arsenical poisoning. It may be as well to say here that there is no such disease as gastric fever; it either means typhoid fever or it is a disturbance of the stomach and intestines from poisoning or eating unripe fruit.

Treatment.—As regards ventilation, nursing cleanliness, disinfectants, etc., the rules laid down in the article on Typhus Fever apply to typhoid fever also, and need not be repeated here. Yet there are some special points which are of importance. The diarrhœa need seldom be checked unless excessive, and then a starch injection with laudanum may be given; if there is much bleeding, it may be necessary to give turpentine. There is no medicine which can cure the fever; the diet must be very light, and no solid food should be taken under six weeks or two months, because, in consequence of the ulceration of the bowels, the coats are very thin and liable to burst. Eating an orange, or a piece of potato, or drinking an effervescent draught, will cause distension of the bowel and may rupture it, just when the patient is doing well otherwise; the greatest precaution should be taken during the third and fourth weeks, as then it is most liable to occur. Milk must form the main article of diet, and then an egg or two may be beaten up in it, or a custard may be given, and beef-tea; then a small piece of mutton, and so on gradually to more solid food. If there is much distension of the bowels, hot flannels, on which is sprinkled a little turpen-

tine, should be applied. For information as to disinfection, *See* DISINFECTANTS.

TYPHUS FEVER.—This is a highly contagious fever, attacking people of all ages, which occurs in an epidemic form, and generally in periods of famine and destitution. It has been known at different times under different names; thus it has been called pestilential fever, brain fever, putrid continual fever, camp fever, jail fever, etc. Typhus is chiefly met with in cold and temperate climates; never in the tropics. The chief cause is contagion, or the transmission of the disease from one person to another; the other causes so-called, such as mental depression, overwork, anxiety, insufficient food, overcrowding, and bad ventilation, only render the system more liable to the action of the poison. It is very rare for a person who has had the fever once to have it a second time. Habits of intemperance increase the danger of those attacked; corpulent people die more frequently than thin ones; black people more than white; and those who are overworked and suffer from mental worry have the disease with most severity.

Symptoms.—It is difficult to say how long the disease may be incubating in the system before it appears, but the period is certainly not constant, and seems to vary from a few hours to several days. The onset is marked by a severe headache, loss of appetite, and languor, and aching of the limbs; the invasion of the symptoms is not so sudden as in relapsing fever, but much better marked than in typhoid fever. For three or four days the patient gets worse, being unable to go about, and feeling chilly and prostrate; he then is worse at night and restless; the skin is hot, the tongue coated; there is thirst and sometimes vomiting; by the third day of the disease most are obliged to take to their bed, while this is not the case in typhoid fever, which is a much more insidious disorder. There is a general aspect of a typhus case, which an experienced person will at one recognize; the patient lies prostrate on his back with a dull and weary, if not stupid, expression; the eyes are suffused and watery, and a dusky flush overspreads the face. As the disease progresses, the eyes are half shut and the mouth open; he lies moaning and unable to move himself or answer questions; the lips and teeth are dry and covered with sordes and look black; the mouth is dry, the tongue dry, brown or black, and marked with cracks. The temperature rises from the first, and reaches 103° or 104° Fahr. by the middle of the first week; the highest temperature reached in the fever is seldom less than 105°, although it may be higher, but the higher the point reached the greater is the danger; the fever may slightly abate, in favorable cases, about the ninth or tenth day; no marked fall, however, takes place until the end of the second week, and generally on the fourteenth day, when defervescence may take place suddenly, and the normal temperature (98·4°) be reached in twenty-four hours, but more commonly it takes two or three days for the descent to be accomplished. The temperature generally is highest of an evening; when defervescence occurs; the temperature always goes below the normal line so as to mark 97° or even 96°, and in a few days it becomes natural. This fall is a very good sign, and then the patient is generally out of danger. A very high temperature (106° or 107°) is a serious sign. Very often, in mild cases, the fever begins to leave on the twelfth day. The pulse is generally 120 in a minute, but is very easily compressed under the finger; the heart-sounds, in very severe cases, are feeble, and the first sound may even be inaudible. A rash appears in nearly every case, and is very characteristic; sometimes it looks as if there were a general mottling just beneath the skin, or distinct spots may appear of small size and purplish color; they are irregularly rounded, at first may disappear on pressure, but soon become petechial; oftentimes the two kinds occur together, but sometimes separately. The rash appears on the fourth or fifth day, rarely later; it comes on the back of the wrists first, in the armpits, and over the epigastrium; then it more or less covers the trunk; it seldom comes on the face and neck; the rash has something of a measly look, but the other symptoms are much more severe than are seen in measles; the rash lasts a variable time, but generally until the fourteenth or fifteenth day. No solid food can be taken, but the patient is always thirsty. The bowels in some cases are confined, in others they are open too much. There may often be heard rattling or wheezing noises in the chest, and the more so when the face is very dusky. The nervous symptoms are well marked; restlessness, loss of sleep, and confusion of thought first come on; then headache, giddiness, a buzzing in the ears, and deafness; in most cases there is delirium, and the patient is beset with horrid fancies. In bad cases he lies picking the bed-clothes, twitching his hands, and muttering to himself or moaning; or he may be quite unconscious with wide-open eyes, staring vacantly. Loss of the power of swallowing and insensibility are very bad signs, and generally precede death. The urine is passed involuntarily as well as the motions in most cases, so that great cleanliness has to be observed.

The duration of typhus may be from three to twenty-one days, but about fourteen or fifteen days is the average time; if a case live more than this time, it will generally recover. The termination in recovery is sometimes quite rapid, and the tongue will clean, the temperature fall, and the delirium cease in a day or two, but generally the improvement is more gradual and lasts over three or four days. Unlike typhoid fever, there is no relapse, so that when once the temperature has come down, the best hopes may be entertained; nor is he liable to peritonitis or perforation of the bowel, as in typhoid fever.

Treatment.—The patient must be placed in a large well-ventilated room, where draughts

may be avoided; he should have his bed so situated that the light from a window will not fall upon his face, as this is annoying; all curtains, carpets, and bed-hangings should be at once removed; the bed should not be too soft, and a macintosh or india-rubber sheet should be placed under the patient. He should not be allowed to exert himself in any way, as it is absolutely necessary that he husband all his strength. The greatest cleanliness must be observed and all excreta removed at once, and carbolic acid or chloride of lime should be mixed with them; soiled linen should be put into a tub containing some carbolic acid. Bed-sores are very liable to form on the back, and so the nurse must always be on the look-out and try to prevent them by smoothing the sheets, drying the patient, and rubbing brandy and balsam of Peru over the part; better still to have a water cushion or water bed. The skin may be sponged down with tepid water, one part being sponged at a time, so as to prevent any undue chill of the surface from exposure; this relieves the patient and partly counteracts that disagreeable smell which the skin gives off in typhus cases. None but the nurse and doctor should see the patient; all noises must be stopped and perfect quiet enjoined; at night there may be a small light in the room, but so placed as not to disturb the patient. Milk must be the chief article of diet, and is best given cold; an egg or two may be beaten up in it, and three or four pints of milk may be given in the twenty-four hours; this must be done at regular intervals of two hours, in equal quantities, special care being taken that it is given at night and in the early morning, when prostration is greatest. Beef-tea and broths, jellies, extract of beef, custards, etc., may be given if the patient can take them and wants them. For drinks in the early stage, lemonade, cold tea, or soda-water may be given, but do not let him have too much effervescent drinks; in bad cases the nurse will have plenty to do to get the milk down. Stimulants are very useful, but the quantity must vary with each case and be left to the doctor's judgment. Brandy is the best stimulant, and may be given with iced milk; too much must not be given at first, as it causes oppression and inability to take nutrient food; but afterwards, in the stage of great prostration, its proper and careful administration may save the patient's life.

Albumen is often present in the urine in typhus, but calls for no special treatment. Much care must be taken, however, that there is no retention of urine in the bladder, as that organ is very liable to be paralyzed. When the crisis has passed and the tongue cleans, some boiled mutton may be given; also jellies, custards, light puddings, etc. The stimulants may then be diminished. If, however, convalescence is retarded by bedsores or the formation of abscesses, the stimulant must be continued and solid food given sparingly. In some cases of typhus the mind is childish for some time after recovery, but a trip to the country, good food, and plenty of fresh air will complete a cure.

In order to prevent typhus spreading, the patient must be completely isolated. For the measures to adopt in disinfecting the clothes, room, etc., *See* DISINFECTANTS.

U

ULCERS.—The favorite seat of ulcers on the surface of the body is the legs; here the ulceration is generally due to local irritation and obstruction of the circulation (varicose veins). Ulcers, when present in parts of the body above the knees, are usually dependent upon some constitutional affection, such as typhus or scrofula, or are connected with some form of cancer. In these cases, of course, the treatment must be general and directed to the originating disease. The only ulcers which are frequent enough to require mention here, or which can be safely trusted to domestic treatment, are inflammatory ulcers and chronic or indolent ulcers.

The Inflammatory Ulcer is met with generally in front of and on the lower half of the leg, and is usually due to slight injury, such as grazed or broken skin. As a rule the patient is either a plethoric individual, whose health has been impaired by excesses in diet, or one advanced in years and exhausted in consequence of hard work and insufficient nourishment. The sore is small and circular and usually single; its base is covered with small granulations of a brownish-red color, from which there is a profuse discharge of thin and acrid ichor; the edges of the sore are sharply cut, and the surrounding skin is hot and red. There is generally severe burning pain in the ulcer and over the inflamed skin. The development of this troublesome and painful affection is favored and in many cases caused by negligence on the part of the patient or by inability on his part to discontinue active work.

The *treatment* of inflammatory ulcer should consist of complete rest of the affected limb; the patient should remain in bed with the limb elevated on a pillow; the ulcer should be dressed with a light bread poultice, warm fomentations, or a weak lead lotion. When the pain has subsided, and the ulcer presents the appearance of a healthy granulating sore, water dressing, or a weak solution of sulphate of zinc, should be applied, and the limb be bandaged from the toes to the middle of the thigh. Local applications alone are quite useless; the patient *must* remain in bed or in a recumbent position, until the ulcer is changed into a rapidly-closing and healthy sore.

The Chronic or Indolent Ulcer is of frequent occurrence among old and debilitated individuals, and in most instances affects the lower part of the leg. It is usually of considerable extent, and in some bad cases completely encircles the limb. The surface is smooth and glassy, is much depressed below the surface, and is surrounded by hard and white edges. The skin surrounding the ulcer is thick and callous; the leg below the ulcer is hide-bound, as it were, and the foot is often swollen. This ulcer, though large and formidable in appearance, is generally free from pain and remains indolent except when much irritated. The hard edges then rapidly sink down, and a large and painful sloughing ulcer is formed.

In the *treatment* of chronic ulcers the essential point is to establish healthy and active granulations, and at the same time to reduce the thickening and induration of the parts around. The patient should keep in the recumbent position, and take a good diet with a moderate amount of alcoholic stimulants. The ulcer should be poulticed, and afterwards, when its surface is moist and bathed by a purulent discharge, should, together with the surrounding hard skin, be strapped by a surgeon and tightly bandaged. By this treatment an indolent ulcer, oval and not very large, will generally be completely closed in the course of a month or six weeks. In cases, however, where the ulcer is old and very large, although considerable improvement may take place, and the raw surface may be much reduced, it is seldom possible to render the limb sound. There is always a tendency for the scar formed over a chronic ulcer to break down and slough whenever the patient begins to walk about again and take active exercise. The popular idea that it is dangerous to close an old ulcer is not unfounded, as the healing over of a chronic ulcer in a person of advanced age is often followed by symptoms of constitutional disorder and slight apoplectic strokes. In cases of this kind it is often necessary to establish a drain upon the system by making an issue or a seton wound. (*See* SETONS.)

UNBOLTED FLOUR.—Flour from which the bran or coarse outer husk of the wheat has not been separated by bolting or sifting. There are several kinds of it; some containing all of the bran, others containing only the inner cuticle of the grain from which *seconds* are made. (*See* FLOUR.)

UNDERGARMENTS (WOMEN'S).—(Chemise.)—Necessary measurements: 1, the length, which varies from 28 in. to 1½ yds., according to taste; 2, the width at the top, which is determined by the shoulders (xvi)*; 3, the arm size; 4, the length of the sleeves and the size of the arm, where it is largest.

The quantity needed for a chemise 1⅛ yds. in length is 2¾ or three yds., according to the size of sleeves and yoke; and cotton or linen seven eighths wide is the most useful.

* For explanation of Roman numerals, *see* CUTTING and FITTING.

All varieties of this garment may be arranged under two principal forms, the sacque and the yoke chemise. We will first explain the mak-

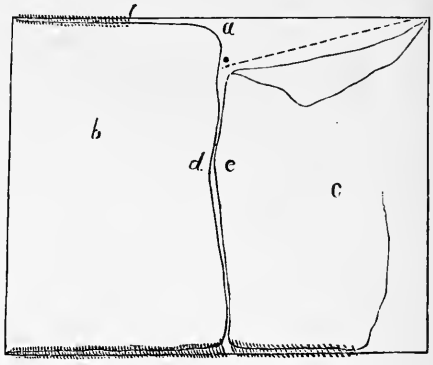


Fig. 1.

ing of the latter. From the designated quantity of material first take off the half yard or three-quarters for the yoke and sleeves. This leaves 2⅛ yds. for the body of the chemise. Fold this in three parts, *a*, *b*, *c* (*a* being as large as *b* and *c* together), and bring the two ends, *d*, *e*, together in the middle, the selvages being at the top and bottom. Sew these selvages together, and we have a sort of bag closed at the ends and open across the middle. In the figure the seam is shown partly made at the bottom, and on the left at the top, while it is left open and the material turned back on the upper right-hand side, to show the manner of cutting the gore. The selvages being entirely sewed together, put in the scissors on the under side at a point four inches from the selvage *a*, and cut, as indicated by the dotted line, to the upper right-hand corner of the bag. Repeat this from the same points to the upper left-hand corner, and from a corresponding point, four inches distant from the middle of the lower selvage down to the lower left-hand and right-hand corners. Unfold the bag, and you have the body of a chemise with gores sewed on on both sides. This gives a suitable proportion to the width at top and bottom. The bottom of the garment should then be hemmed up with an inch-wide hem. Thus far, the sacque and the yoke chemise are prepared in the same way, with the exception that for the sacque the gores are made wider, diminishing the breadth at the top.

For the yoke chemise we now cut the breadths apart at the top, and gather them, leaving a distance of two or three inches plain at each end, to receive the shoulder-piece, 7, Fig. 2. These shoulder-pieces are cut double, the longest part the long way of the material, hollowed toward the sleeve a little, and still more toward the neck, and are united to the body of the chemise by the yoke, which is only a straight strip, 6; a slit 8 is made in the front of the garment, and a button and button-hole are required, or two button-holes, if a stud is used. There are many other

ways of making a yoke, which will readily suggest themselves to the reader; but we have preferred this, as it is the simplest and the surest to fit well.

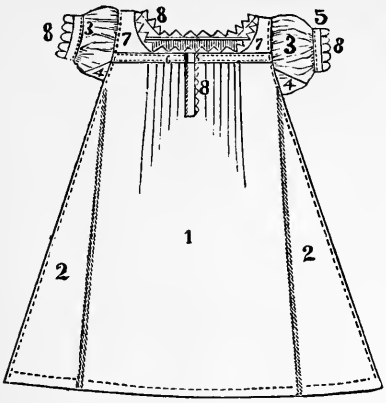


Fig. 2.

The puffed sleeves are made by taking a straight strip, not over four inches deep and a third longer than the length of the arm size. They must be cut out a little under the arms, and have gussets or gores, as shown in the figure, and be gathered into bindings whose length is determined by the measure of the arm.

The sacque differs from the yoke-chemise in the manner in which the neck is finished off, and it may have also a plainer sleeve. In Fig. 3 is shown the manner of cutting the garment out in the neck. It will be seen that, instead of receiving shoulder-pieces, the chemise is left whole on the shoulder, and cut out to a considerable distance below for the neck. Having decided the depth to which it is to be cut out

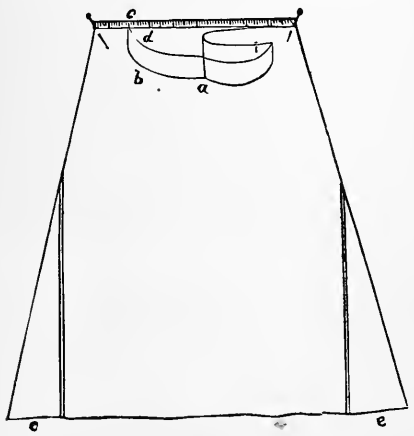


Fig. 3.

mark the point, *a*, and cut from *c*, on the shoulder, the front, *c b a*, and then the back, which must not be cut out as deep as the front. Thus, having cut out half the neck, fold back the strips and pin it down upon the other half; then cut that out also; in this way the two sides are sure to be exactly alike. The garment is then finished around the neck by a crosswise facing, and may receive whatever trimming is desired. A variety of small sleeves suited to the sacque can readily be designed on the same general plan as the puffed sleeve, one of the prettiest of which is cut whole and bias under the arm, then grows narrower toward the shoulder and finally crosses its two ends, they being sloped entirely to a point as they are set into the shoulder. A still simpler pattern is shown in Fig. 6.

Drawers.—For making drawers, only two measurements are required: 1, the length from the waist to the ankle, taken on the outside of the leg; 2, the size of the waist.

In drawing a pattern, (Fig. 4,) we begin with a vertical line, *a b*, on which is to be marked

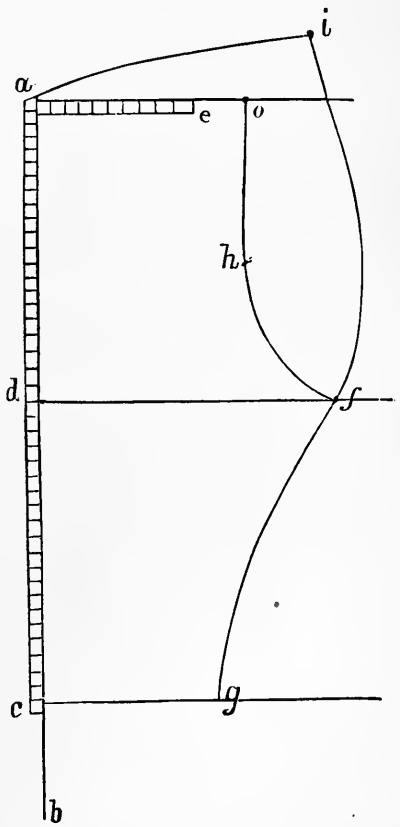


Fig. 4.

the measure of the length, *a c*. We then draw three lines horizontally, the first at the top from the point *a*; the second midway of the line *a c*; the third at the lower end, from the point *c*. These three lines serve as points of

departure in indicating the measure of the waist, the breadth across the seat, and the size of the leg near the ankle.

One end of half the waist-measure is then placed at *a*, and marked at the right by the point *e*. The breadth of the seat is given by half the length from the waist to the ankle, the space between *a* and *d*. If, for example, this length be 30 in., half of it, 15 in., will indicate the breadth necessary from *d* to *f*. The suitable breadth at the ankle will be decided by individual preference. It is indicated upon the pattern by *c*, *g*. Most persons will prefer to shorten this pattern below the knee, but it is requisite to take the measure in this manner in order to ensure correct proportions.

Having marked the above measurements, we now draw the pattern of the front of one side as follows: two or three inches beyond the point *e* we draw a straight line down to the point *h*, which point is half way between the two horizontal lines *a e*, *d f*. From *h* a curved line is drawn to *f*, and an oblique line, slightly curved inward and becoming almost straight in its lower part, to *g*. This line is the same for the front and back; but the upper part of the pattern differs in the back, requiring to be broader and longer. For this purpose we mark above the horizontal *a e* the point *i*, at a distance of four inches from the line, not directly

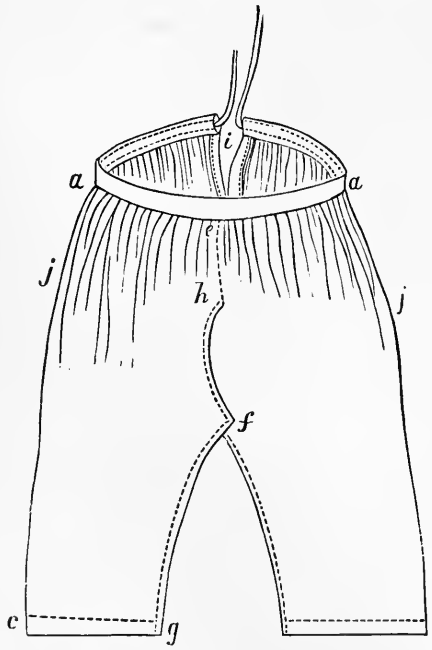


Fig. 5.

above *e*, but five or six inches to the right. We then draw a line from *i* to *a*, and another curving outwards, from *i* to *f*.

In Fig. 4 is shown the pattern of half of a pair of drawers, the front and back, which are cut out in one piece, as we shall proceed to explain.

The quantity of material required is twice the length of the side from waist to ankle, with the addition of a few inches for binding. The length allowed will usually admit of hem and tucks being made in it. In making this estimate, however, we require to piece the back of the drawers when it is cut longer than the front; to escape this necessity, an additional quarter of a yard for each length should be allowed. We fold the material of which the garment is to be cut lengthwise in the middle, and place the pattern on it, the line *a c* upon the fold, and hold the pattern in place by a few pins. We then cut the material double from the lower edge, *e*, as far up as *f*. Here we unfold the material in order to cut half after the outline *a o*, *h f*, and the other half, *a i f*, leaving an inch margin all around the edges. This gives us half the pair of drawers, and from this we cut the other half.

In making up the garment, we begin by sewing on the pieces, if it has been needful to piece it. Then we stitch up each half on the wrong side from the lower edge, *g* to *f*, and finish off the hem and tucks across the edge *c g*. We then unite the two halves in front by a seam from *e* to *h*. The two halves in the back remain separate, and also in the front between *f* and *h*; we then finish these edges with a very narrow hem, and put on a belt, either measured

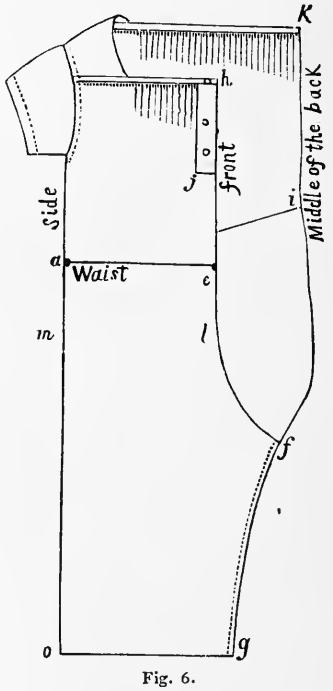


Fig. 6.

by the waist and having the top of the drawers gathered to match it, or made as large as the breadth of the drawers, and having a drawing

string to hold it in place, as shown in Fig. 5, *a a*.

Another method of making drawers consists in joining the two halves completely by a seam from *i* to *e*. In this case the garment is opened at the sides from *a* to *j*. These edges require to be faced and finished off with a little gusset at *j*, to strengthen them. The upper edge of the drawers is then gathered, and the belt sewed on in two parts, having buttons on the front, and button-holes on the back.

In Fig. 6 we give a pattern of bathing drawers, which may be used either with or without a short outside skirt. These drawers differ from the preceding pattern in being made with a waist and being much looser than the others. In order to make this waist it is only necessary to prolong the drawers above the waist to a height determined by the measure from the waist to the shoulder. These drawers are entirely closed, that is to say, in the back the seam is prolonged from *f* to *k*, and in front from *f* to *j*. The top of the waist is gathered and may be finished off merely with a drawing-string or with a yoke and shoulder pieces, as shown in the pattern; a short sleeve is put into a very large arm-size; the slit *k j* is faced and receives buttons on the left and button-holes on the right side. These garments are made of woollen material in red or black flannel and trimmed with colored braid, and if there is a skirt, it reaches but just below the knee, and is trimmed to correspond with the drawers.

Children's drawers and trowsers are made after this pattern, with slight modifications. Although we do not make them so very loose as bathing-drawers, they require to be very easy. They are put together by a seam from *l* to *h*, and left open and hemmed from *l* to *i*, the back of the waist from *i* to *k* is hemmed and closed by buttons.

For little boys, the same pattern serves for trowsers, separated entirely from the waist. The waist is then made with a belt, having buttons sewed on to correspond with button-holes in the binding of the trowsers. The trowsers are made plain across the front and gathered a little at the sides and the back. A straight slit is made from the waist *e*, to *l*. False hems are added to the edges of this slit, that on the left coming to *h*, the edge and receiving buttonholes, that on the right coming *beyond* the edge, thus crossing under the other and having the buttons sewed on it. Also slits are cut at each side to receive the pockets.

When the trowsers are cut very broad, they are gathered on the edge and sewed into a binding more or less tight, just below the knee. It is usual to hem these with a band or galloon, or with a row of buttons from *a* to *o*.

UNGUENTS. (*See* OINTMENTS.)

URINALS.—These should be thoroughly clean and amply supplied with running water. Night and morning they should be well flushed down. It is well to have a piece of soap lying in the vessel, and some chloride of lime placed about, so as to remove any noxious odors. Great pains should be taken at all times to remove any accumulation of fluid. The walls should be made of glazed tiles rather than of metal, wood, or slate, and the roof should communicate freely with the open air.

URINE, Suppression of. (*See* DIURETICS.)

USQUEBAUGH.—A name sometimes given to Irish and Scotch whiskey indiscriminately. Properly speaking, it applies to a drink formerly very popular in Ireland made by digesting spices in some compound spirit. The famous *Meg Dodd's Usquebaugh* is made as follows:—To two quarts of best brandy or whiskey put a pound of stoned raisins, half an ounce of nutmeg, a quarter of an ounce of cloves, and the same quantity of cardamom seed, all bruised in a mortar; add the rind of a Seville orange rubbed off on lumps of sugar, half a teaspoonful of tincture of saffron, and half a pound of brown candy-sugar. Shake the infusion every day for a fortnight, and then filter it into bottles for future use. *Not a drop of water must be put to this cordial.*

V

VACCINATION.—A process by which a peculiar specific disease, known as the cow-pox or vaccinia, is introduced into the system with the view of protecting it against an attack of small-pox. Its discovery (one of the most beneficent in the annals of medicine) is due to Dr. Jenner, whose attention was arrested by the fact that the milkers on the dairy-farms in Gloucestershire, to whom cow-pox had been communicated from the cow in the course of their occupation, were not liable afterwards to be affected by small-pox. As the virus could not always be obtained from the cow, Dr. Jenner conceived the idea that it might be equally effectual as a preventive of small-pox if communicated from one individual to another; and the observations made during the first fifteen years confirmed this opinion. At first the theory was eagerly opposed, both in and out of the profession, and among the more ignorant some opposition is still manifested; but the accumulated experience of recent years has proved overwhelmingly that vaccination is a real blessing to the human race. Even if there were doubts about the matter, the mere chance of substituting so mild and harmless a disease as cow-pox for one so terrible as small-pox should induce parents to have every child vaccinated at the earliest possible moment.

With regard to the proper age for vaccinat-

ing an infant, experience has shown that, although it may be proper to defer it for the three or four first weeks of an infant's life, on account of a variety of circumstances connected with that period, yet, if the organization of a child be perfect, and if it be in good health, the sooner it is vaccinated after the first month the better. The diseases which interfere with vaccination as a preventive of small-pox, are eruptive diseases, teething, and affections of an inflammatory nature. Under eruptive diseases and teething, the specific irritations which these occasion prevent the fever attending cow-pox from being sufficient for the constitutional change requisite to secure the child from the infection of small-pox. In order to be certain that the constitution has been properly affected, some medical practitioners re-vaccinate the child on the fifth or sixth day after the original vaccination, with a little of its own lymph; while the original vesicles proceed regularly to their termination, if those from the re-vaccinated be accelerated, and acquire the inflamed areola and scab at the same time with the first, they then declare that the system has been properly affected.

If a child be vaccinated with pure vaccine lymph taken from the arm of another child, nothing will be seen locally during the first two days, but at the end of the second or on the third day, a small red pimple appears, which gradually increases in size, and on the fifth or six day it has become a vesicle or little blister of a pearly color, with well-defined raised edges, while the centre is depressed and concave. On the eighth day the vesicle has become perfect; it is round and plump, and the edges are more defined and pellucid, while the centre is more concave. About this time a red blush or areola is seen round the vesicle, and this continues to spread for a zone of from one to three inches; the skin looks red and angry, and becomes hard and painful from an affection of the tissue of the skin. When this areola appears, the child generally presents constitutional symptoms; sometimes they are very slight and pass by unnoticed; others may be peevish and restless, and have some derangement of the bowels or enlargement and inflammation of the glands in the arm-pit. On or about the tenth day the areola begins to fade, the vesicle dries in the centre, while the lymph gets opaque and turbid, so that by the fourteenth or fifteenth day a dark-brown scab is formed, which dries, blackens, and falls off between the twentieth and twenty-fifth day; a cicatrix or scar is left, which becomes permanent, is generally circular, and marked with minute pits. Such are the stages through which the vesicle passes, but it is important to note that only on the eighth day is the vesicle in perfection, and it is then only that lymph should be taken. It happens occasionally that parents are much alarmed by skin eruptions occurring after vaccination, and they often lay it down heedlessly to the fault of the surgeon for introducing bad matter; this is a great mistake, for in some children any constitutional disturbance will bring out an eczematous eruption, as is indeed often seen when they are teething. No alarm need be felt on this score, as the mischief is soon cured, and it depends upon some peculiarity in the child's constitution. At times a rose-colored rash may appear on the body, or a crop of papules or vesicles; these are generally very transitory, and disappear when the scab falls off the arm. The shape of the scar, and also its size, will depend upon the way in which the vaccination is performed; some make the puncture in three or four places on the arm, about an inch from each other; others scratch or scarify the skin, and some make punctures very close together, so that when the vesicles form they coalesce or run together and form a large irregular scab. All these methods are equally efficacious, and are adopted according to the fancy of the operator. Should the child be incubating measles or scarlet fever, the areola may not form until these diseases have gone. Mere delay in the appearance of the symptoms will not hinder the protective influence, so long as the red areola appears before the child is exposed to small-pox. When acceleration of the symptoms occurs the vaccination is generally useless and spurious; if any doubt exist, the child should be vaccinated again after a short interval. The important rule to remember is this—"if there is any deviation from the perfect character of the vesicle and the regular development of the areola, the vaccination is not to be relied on as protection against small-pox."

Re-Vaccination.— By vaccination in infancy, if thoroughly well-performed and successful, most people are completely insured, for their whole life-time, against an attack of small-pox; and in the proportionately few cases where the protection is less complete, small-pox, if it be caught, will, in consequence of the vaccination, generally be so mild a disease as not to threaten death or disfigurement. If, however, the vaccination in early life have been imperfectly performed, or have from any other cause been but partially successful, the protection against small-pox is much less satisfactory, neither lasting so long, nor while it lasts being nearly so complete as the protection which first-rate vaccination gives. Hitherto, unfortunately, there has always been a very large amount of imperfect vaccination; and in consequence the population always contains very many persons who, though nominally vaccinated and believing themselves to be protected against small-pox, are really liable to infection, and may in some cases contract as severe forms of small-pox as if they had never been vaccinated. Partly because of the existence of this large number of imperfectly vaccinated persons, and partly also because even the best infantile vaccination sometimes in process of time loses more or less of its effect, it is advisable that all persons who have been vaccinated in infancy should, as they approach adult life, undergo re-vaccination. Generally speaking, the best time

of life for re-vaccination is about the time when growth is completing itself, say, from fifteen to eighteen years of age, and persons at that period of life ought not to delay their re-vaccination till the time when there shall be special alarm of small-pox. In proportion, however, as there is prevalence of small-pox in any neighborhood, or as individuals are from personal circumstances likely to meet chances of infection, the age of fifteen need not be waited for; especially not by young persons whose marks of previous vaccination are unsatisfactory. In circumstances of special danger, every one past childhood, on whom re-vaccination has not before been successfully performed, ought without delay to be re-vaccinated. Re-vaccination, once properly and successfully performed, does not appear ever to require repetition.

Even when small-pox attacks a person who has been properly vaccinated, the febrile symptoms are generally mild, and almost always subside on the seventh day, when the patient rapidly recovers.

VALERIAN.—The root of a well known plant, the *Valeriana officinalis*. The best plants grow in dry soils. The root consists of a kind of stock or head, whence numerous rootlets are given off. The color is light brown, the odor peculiar and characteristic. The roots contain valerianic acid and an oil. This oil contains two substances, valerole and valerianin, neither of very great importance. Valerole, by exposure, is slowly converted into valerianic acid. The preparations of valerian are an infusion, a tincture, and an ammoniated tincture, in which aromatic spirit of ammonia replaces the ordinary spirit.

Valerian acts as a powerful stimulant. It is mostly given in nervous diseases, especially in those of hysterical subjects, as well as in chorea and such like affections, as an anti-spasmodic. Some esteem it very highly, others rather scout its efficacy. The ammoniated tincture is the best form of the remedy. The dose is a drachm repeated every two or three hours until relieved.

Valerianic Acid, though contained in valerian, is prepared from a totally different substance. Fusel oil, which is a waste product in the distillation of most forms of alcohol, though more abundant in some than others, tends, when kept, to pass by oxidation into valerianic acid. This may be done at once by chemical means, sulphuric acid and bichromate of potass being employed. The acid is then neutralized by carbonate of soda, and valerianate of soda is produced.

Valerianate of Soda is hardly ever used itself in medicine, but is employed in the manufacture of another salt, *valerianate of zinc.* This salt occurs in fine scales, with the odor of valerianic acid. It is not really soluble in water. Valerianate of zinc is commonly esteemed a very valuable nervine tonic, though some prefer to give sulphate or oxide of zinc along with the ordinary tincture of valerian. It has been given in nervous affections, as chorea, epilepsy, and hysteria. It has also been given with advantage along with quinine in neuralgia. A valerianate of quinine is now made. The dose of valerianate of zinc is from three to five grains or more.

VANILLA.—The fruit of a plant native to America. In the form of *beans* it is used in perfumery, etc., and the *extract* is extensively employed for seasoning creams, pastry, etc., to which it gives a delicious flavor. Although the plant is a native of America, all the extracts of vanilla were formerly imported; at the present time, however, "Burnett's Extract of Vanilla" is considered superior to any other. The bottle should be kept tightly corked.

VAPOR BATH.—A bath in which the vapor of hot water, either medicated or not, is applied to the skin. Vapor baths are used only for medical purposes, and are very useful in several forms of disease where sweating is desirable. In the early stages of acute rheumatism, in bad colds, and influenza, they often prove very serviceable by cutting them short or breaking them up. There are many contrivances for giving them, of which the most simple is a hot brick or stone placed in a bucket about two-thirds full of hot water, and set beneath a cane-bottomed chair. The patient must sit in the chair, entirely naked, but with a large blanket fastened around the neck enveloping the body, and coming down to the floor on all sides. The object being to induce a profuse perspiration, it may be necessary to put into the water a second, or even a third, hot brick. When the patient has perspired very freely, rub him dry with hot towels, and get him to bed as soon as possible. (*See* RUSSIAN BATH and TURKISH BATH.)

VARICOSE VEINS.—This disease is an enlargement of the veins, which is very frequent in the lower limbs of persons who, like cooks and laundresses, have to stand many hours of the day. Sometimes the veins become so large that they burst, and though the bleeding which results may not endanger life, it causes great debility. In old people, and in cases where the varicose condition is of long standing, large ulcers may form on the lower part of the leg, constituting the so-called *varicose ulcers.*

Treatment.— There are two things which people afflicted with varicose veins should attend to. In the first place, whenever it is possible, even for a few minutes, place the limbs in a horizontal position, either by lying down or by raising them. Secondly, support should be given by enveloping the entire limb in bandages (preferably of flannel) put on evenly and smoothly in the morning before the legs have time to swell. This should be done by another person, for the shape of the leg is altered by bending it or stooping over. But the best plan of giving support is by elastic stockings, which can be purchased of the exact size required; they can be drawn on over a well-fitting cotton stocking, without any trouble, give equal and gentle support to any part of the limb, and if good will last a long time. Many operations have been devised for the purpose of producing

permanent obliteration of the distended veins. Of these the safest and the one most commonly practised consists in the application of needles and twisted suture, tying the veins. These operations rarely effect a permanent cure, but they often afford relief for considerable periods.

VARIOLA. (*See* SMALL-POX.)

VARIOLOID.—This name is given to the mild form which small-pox takes in persons who have been vaccinated, or who have already once had the disease. It is always less virulent than small-pox itself, and is very rarely attended by serious results. (*See* VACCINATION.)

VARNISH.—A great variety of varnishes are sold in the paint and oil stores ready mixed, and it is best to buy them in this way. Of those more commonly used, *Carriage-rubbing Varnish* is used to fill up or produce a level surface over paint, on which to spread other and better qualities of varnish. It dries in about ten hours. *Hard-drying Body Varnish* is used for finishing-coats over a level surface, on work not requiring the greatest durability, and is particularly adapted for the best inside work. *Wearing Body Varnish* is very pale and surpasses all other varnishes in freedom of working, as well as in brilliancy and durability. Though a long time in hardening, it sets out of the way of being affected by dust in ten or twelve hours. *Furniture Varnish* is an inferior quality, containing more resinous substance than copal or mastic gums. It is, however, sufficiently durable and glossy for its purpose.

Copal Varnish is the best and hardest for woods, but can only be made in the factory.

Mastic Varnish.— Take four ounces of mastic tears and one pint of oil of turpentine. Put them into a stone bottle, which should be plunged into a saucepan of hot water and kept over a charcoal fire about one and a half hours, until dissolved. The cork should be notched at the side to prevent the bottle bursting. The time of boiling varies, of course, with the degree of heat employed; therefore the best way to test its fitness is to take a little from the bottle and apply it to the finger; if it appears, on cooling, of the consistence of a thick syrup, soon becoming ropy, then drying and glueing the fingers together, and leaving a shining appearance, it is sufficiently boiled.

The greatest caution should be exercised in making varnishes not to have a fire with a flame, the pot too low, or the bottle too full; and always to have a pail of water at hand, to put out the fire in case the vapor from the varnish inflames.

Shellac Varnish.—This may be purchased ready prepared, but it is best to make it when required. Take one pound of gum shellac, cover it with alcohol, and set it in a cool place; shake the mixture occasionally, and in a day or two it will be ready for use. Shellac varnish is used to prevent the resinous substance in pine knots from striking through the paint, by simply coating them over before the priming is put on.

A little lamp-black added to this varnish converts it into an excellent harness varnish.

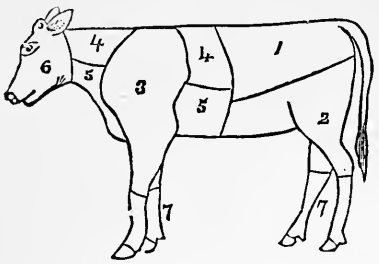
White Varnish.—Take an ounce of gum mastic, two ounces of gum juniper, two drachms of Venice turpentine, and one pint of spirits of wine. Mix well, and dissolve by heat.

VARNISHING.—When furniture or any of the interior woodwork of the house requires re-varnishing, it should first be thoroughly cleaned by rubbing every part with pulverized pumice-stone and water; then, when well washed and dried, the varnish should be laid on in a warm room. Furniture varnish, as obtained from the stores, is generally ready for use; but if found too thick to spread easily with a brush, set the vessel containing it near the fire, taking care that it does not ignite. Put the varnish on quite plentifully and rub it lightly with the brush until it is nicely levelled down and there are no small air-bubbles on the surface. Do not touch the varnished surface with the brush after once leaving it. If more than one coat of varnish is necessary to produce the desired polish, the surface should be rubbed with pumice-stone and water between each coat, to remove small pits or imperfections, and to form a better ground on which to *flow* the succeeding coat. Of course each coat must be dry before another is put on.

VEAL.—The flesh of a calf. The best veal is produced by calves not less than four nor more than six weeks old. The veal from a calf less than four weeks old is unfit for food and is unwholesome; after six weeks the calf requires more food than the mother can give it, and the change to grass, or hay, or meal materially alters the character of the flesh, which becomes darker and less juicy. When the calves are turned out and fed wholly on grass the flesh becomes poor, dry, tasteless, and nearly as dark-colored as beef. Good veal is fine-grained, tender, and juicy; the fat in such is firm and of a whitish color. If too white, the veal shows that the calf was bled before being slaughtered—a process which may add to its appearance, but which deprives the meat of much of its juiciness and flavor. Veal will not keep as long as older meat, especially in hot or damp weather; when going, the fat becomes soft and moist, the meat flabby and spotted, and somewhat porous, like sponge.

The hind quarter is the choicest joint. It is usually divided by the butcher into two parts, which are called the *loin* and *leg* of veal. When the loin is too large, it is divided into two small joints: the thin end is called "kidney end," and the other "thick end." From the leg is cut the "fillet" and "veal cutlets." The "knuckle of veal" is the part of the leg left after the fillet or cutlets are taken from it. Many persons prefer the *breast of veal* for roasting, stewing, pies, etc.; it is sometimes boned so as to roll, or a large hole is cut into it for the reception of stuffing. The *neck of veal* is used for stewing, fricassee, pies, etc. (*See* CALF'S SWEETBREADS, HEAD, and TONGUES.)

The following figure represents a calf about six weeks old; the marks and numbers show the different joints with their several names :—



Carcass of Veal

1. Loin of Veal.
2. Leg of Veal.
3. Shoulder of Veal.
4. Neck of Veal.
5. Breast of Veal.
6. Calf's Head.
7. Calf's feet.

Baked Veal.—The loin, leg, and shoulder are the best joints for baking. Put the piece of veal into a baking-pan; spread butter over it, and sprinkle with pepper and salt; cover the bottom of the pan with water about a quarter of an inch deep; place a piece of buttered letter-paper over the meat, and set it in a moderate oven; baste often with the water and juice in the pan, over the paper, which need not be removed till about ten minutes before the meat is taken from the oven, unless it burns, when it must be replaced by another. Veal must be baked rather overdone Serve with the gravy strained and the fat skimmed off.

Balls (Veal). (*See* ENTREES.)

Blanquette of Veal.—Take about two pounds of veal from any joint, cut it into pieces about two inches square, and throw them into boiling water with a little salt; let them boil five minutes and then drain them. Put in a stewpan a tablespoonful of butter, set it on a good fire, and when melted mix in a tablespoonful of flour, stirring all the time; when this begins to turn yellow, pour a pint of boiling water gradually into the pan; add a teaspoonful of chopped parsley, six small white or red onions, two or three mushrooms, salt, pepper, and finally the meat; stew gently about three hours, and serve.

Boiled Veal.—Either the breast, fillet, leg, loin, or shoulder may be boiled. Prepare as for roasting, and boil steadily for three hours. Serve with celery or oyster sauce.

Breast of Veal, Stuffed.—Remove all the bones from a breast of veal, being careful not to cut through the fleshy part; wash it clean and wipe dry; have ready some stuffing, roll it up in the meat, sew it tight, lard it, and put it into a saucepan with enough water to cover it; cut up a head of celery, a carrot, and an onion, put them into the saucepan, add a little salt, pepper, and mace, and stew the whole about two hours and a half. Take out the meat, and, if you wish to serve it hot, rub it well with butter, dredge with flour, baste it with some of the liquor, and set it in a quick oven to brown. Meanwhile prepare the gravy as follows: Take a pint of the liquor and skim off all the fat; stir in with a tablespoonful of butter, two tablespoonfuls of flour; put it into the liquor, stirring all the time; add a little mace, a teacupful of cream, and a gill of white wine; give it one boil, pour a little over the meat, and serve the rest in a gravy-tureen.

If the meat is to be cut cold, do not brown it, but serve with meat jelly.

Broth (Veal). (*See* BROTH.)

Cakes (Veal). (*See* ENTREES.)

Cutlets.—These may be broiled plain by simply spreading butter over them, sprinkling them with pepper, and laying them on the grid-iron over a hot fire. But the best way of preparing them is to sprinkle them with salt and

Cutlet Bat.

pepper, dip them in beaten egg, then roll them in cracker-crumbs, and fry them brown on both sides in hot lard or dripping. If butter or dripping is used, add a little hot water, thicken with browned flour, boil up once, and send to table in a sauce-boat. If the cutlets be tough (which they should not be if the veal is young), beating with a bat like that shown in the cut will improve them.

Fricandeau of Veal.—Take a piece of veal of any size from the leg, loin, or cutlet piece, about three quarters of an inch in thickness, and lard one side with strips of salt pork. Put in a saucepan (for two pounds of veal) one ounce of butter, half a middling-sized onion, as much carrot cut in slices, two or three stalks of parsley, one of thyme, six or eight pepper corns, and the rind of the pork used in larding; spread all these on the bottom of the saucepan, lay the piece of veal on them, larded side up, and set on a good fire for about fifteen minutes; then raise the meat and see if the under side is well browned; if so, add a gill of broth, put in the oven and baste often; if not, leave a little longer on the fire. Add a little broth once in a while, to keep the bottom of the pan wet, and to leave enough to baste the meat till it is a little overdone; dish the vegetables, place the fricandeau on the top, and serve with the gravy strained over all. This is an excellent dish, which is not at all difficult to prepare.

Fricasseed Veal.—Cut into small, thick, handsome slices of equal size about two pounds of veal, quite free from fat, bone, and skin; melt a couple of ounces of butter in a wide stewpan, and just as it begins to boil lay in the veal and shake it over the fire until it is quite firm on both sides, but do not allow it to take the slightest color. Stir in a tablespoonful of flour, and when it is well mixed with the cutlets pour gradually to them, shaking the pan often, enough boiling veal gravy to almost cover them; stew gently for fifteen minutes, or longer should they not be perfectly tender; add a

flavoring of mace, some salt, a quarter of a pint of cream, a couple of egg-yolks, and a little lemon-juice; shake the saucepan above the fire until the sauce has just set, and then serve immediately.

Gravy (Veal). (*See* GRAVY.)

Hashed Veal.—Chop some cold veal very fine and mix with it, while chopping, half as much stale bread-crumbs; put it in a saucepan and pour over it a gravy made as follows: Put a teacupful of boiling water into a saucepan, and stir into it a teaspoonful of flour wet with a teaspoonful of cold water; add not quite half a teaspoonful of black pepper, as much salt, and two tablespoonfuls of butter, let it get hot but not boil before pouring it on the hash. After the gravy is added, let the hash simmer on the fire for ten minutes; then serve.

Minced Veal.—Chop some cold roast or boiled veal very fine, and season it well with salt and pepper; if there is any cold gravy, put it with the meat, if not, butter will answer; heat it very hot, stirring often that the gravy may not oil. Serve it on slices of toasted bread and garnish with sliced lemon.

Neck of Veal a la Creme.—Take the best end of a neck of veal, detach the flesh from the ends of the bones, cut them sufficiently short to give the joint a good square form, fold and skewer the skin over them; wrap a buttered paper round the meat, lay it at a moderate distance from a clear fire, and keep it well basted with butter for an hour and a quarter; then remove the paper and continue the basting with a pint or more of rich white sauce (*See* SAUCES) until the veal is sufficiently roasted, and well encrusted with it. Serve some white sauce under it in the dish, and send it very hot to table.

Olives (Veal). (*See* ENTREES.)

Pie (Veal).—Cut some veal from the neck or other joint into small slices; line a pudding-dish with a good paste, and put a layer of veal in the bottom, then one of hard-boiled eggs, sliced, each piece buttered and peppered before it is laid upon the veal; cover these with a layer of sliced ham or thin strips of salt pork; squeeze a few drops of lemon-juice upon the ham, add another layer of veal, and so on as before until the dish is nearly full; pour over all a teacupful of stock or broth, cover with a stout crust, and bake in a moderate oven for two hours. If no stock or broth is at hand, make a gravy of the bones. fat, and refuse bits cut away from the meat, and a teacupful of cold water; let these stew together while the pie is being arranged in the dish, or for half an hour, and then pour in.

Pot Pie (Veal).—Make a crust as follows:—Peel, boil, and mash a dozen potatoes, add two tablespoonfuls of butter, half a teacupful of milk or cream, and a teaspoonful of salt; stiffen with flour till it will roll out easily.

To prepare the meat, first fry half a dozen slices of salt pork, and then cut up the veal and pork and boil them in just enough water to cover them till the veal is nearly done. Then peel a dozen potatoes and slice them thin. Roll the crust out half an inch thick, and cut it into oblong pieces. Put a layer of the crust at the bottom of a small pot, then a layer of meat and potatoes, then a sprinkle of salt and pepper, then another layer of crust, and so on till all is used, making the top layer of crust; lastly, pour on the liquor in which the meat was boiled, until it just covers the whole, and let it simmer from half to three quarters of an hour, or until the top crust is well cooked. The excellence of this pie depends on the crust being very light; therefore the meat must first be nearly cooked before it is put into the pie, and the crust must be in only long enough to cook, or it will be clammy and tough. When nearly done, the crust may be browned with a hot shovel (held near it) or a bake-lid with hot coals on it.

Roast Veal.—I. *Breast*—Place the joint at a moderate distance from a good fire and roast slowly, basting often, first with salt and water, then with gravy, and once with melted butter when nearly done; just before the butter is spread on, dredge lightly with flour. Skim the gravy, thicken with browned flour, boil up once, and send to table in a gravy-boat. The veal may be garnished with fried balls of stuffing (*See* STUFFING) about the size of a walnut.

In roasting veal allow at least a quarter of an hour to a pound.

II. *Fillet.*—Remove the bone carefully, roll the meat up and pin it into a round with skewers; then pass a twine or band of muslin several times round it and tie. Fill the cavity with a dressing made of bread-crumbs, chopped thyme and parsley, a little nutmeg, salt, and pepper, rubbed together with some melted butter or beef-suet, moistened with milk or hot water, and bound together with a beaten egg; stuff the dressing between the folds of the meat also, and make incisions here and there with a thin, sharp knife to receive it; now and then slip in a strip of salt pork or bacon. Roast slowly, basting often, at first with salt and water, then with gravy, at last with flour and melted butter, as directed in preceding recipe.

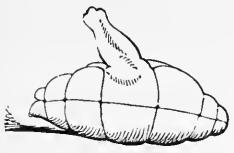
III. *Leg or Loin.*—Roast exactly as directed for Breast of Veal. Should the meat brown too fast, cover with buttered paper. Send its own gravy to table with it in a boat.

IV. *Neck.*—The best end of the neck makes an excellent and economical roast. A stuffing may be inserted between the skin and the flesh by first separating them with a sharp knife, or the dish may be garnished with the forcemeat in balls. Let it be floured when first laid to the fire, basted constantly, and kept throughout at a sufficient distance to prevent scorching. Pour melted butter over it when it is dished, and serve it like other joints.

V. *Shoulder.*—Make horizontal incisions near the bone, fill them with a dressing like that for Fillet, and roast as directed for Breast.

Shoulder of Veal, Stuffed.—Before the joint can be stuffed it must be *boned*, for which proceed as follows: Spread a clean cloth upon

a table, or dresser, and lay the joint flat upon it, skin downwards; with a sharp knife cut off the flesh from the inner side nearly down to the blade-bone, of which detach the edges first, then work the knife *under* it, keeping it always *close to the bone*, and using all possible care not to pierce the outer skin; when the bone is detached from the flesh in every part, loosen it from the socket with the point of the knife and remove it; or, without dividing the two bones, cut round the joint until it is freed entirely from the meat, and proceed to detach the second bone. That of the knuckle is frequently left in, but for some dishes it is necessary to take it out; in doing this, be careful not to tear the skin.



Shoulder of Veal Boned.

Fill the inside with common stuffing (*See* STUFFING), or with sausage-meat; roll it up, and when properly tied with twine, roast or bake it as directed above.

Steak (Veal).—This should be cut in thinner slices than beef-steak, and must be thoroughly cooked. Broil on a greased gridiron over a hot fire, and when done, spread butter over them, sprinkle with salt and pepper, and serve hot.

Stewed Veal.—Cut four pounds of veal into strips an inch thick and three inches long; peel a dozen large potatoes and cut them into slices an inch thick; spread a layer of the veal on the bottom of a pot, and sprinkle a little salt and pepper over it, then put a layer of potatoes, then a layer of veal seasoned as before; use up the veal thus, and over the last layer of veal put a layer of slices of salt pork, and over the whole a layer of potatoes; pour in water till it rises an inch above the whole, and cover the pot as closely as possible; stew very gently for an hour and twenty minutes.

VEGETABLES.—For an explanation of the relative qualities of vegetable as compared with animal food, see FOOD and DIET. All green vegetables should be as fresh as possible, and should not be eaten at all when really stale, as they often are in the markets. Put them into cold water with some salt in it for about ten minutes, to clear them from dirt and insects. If not quite fresh, let them remain in the water some time longer; then drain them in a colander, and put them into a pot with plenty of boiling water, adding a spoonful of salt. Vegetables should generally be boiled quickly, and all scum that rises should be carefully removed. Do not allow them to remain in the water after they are done, but drain them in a colander and dress as directed in the various receipts.

The following list comprises the vegetables treated of in their proper places:

Artichoke,	Okra,
Asparagus,	Onions,
Beets,	Oyster-plant,
Broccoli,	Parsley,
Brussells Sprouts,	Parsnip,
Bushbean,	Potatoes,
Cabbage,	Purslane,
Carrots,	Radishes,
Cauliflower,	Rhubarb,
Celery,	Salsify,
Corn,	Savory,
Cucumber,	Sea-Kale,
Egg-plant,	Shallots,
Endive,	Spinach,
Eschalots,	Sprouts,
Garlic,	Squash,
Gherkins,	Tomato,
Kale,	Turnip,
Lettuce,	Water-Cress,
Nasturtium,	Yams.

VEILS, To Clean.—For black veils use ox-gall, as directed for black silk. For white veils wash them in a warm lather of white soap and water, then squeeze them, and rinse them in cold water with a drop of liquid blue in it Then starch the veil, clap it between the hands and pin it out on a frame to dry.

VELVET.—A rich kind of stuff in which, besides the ordinary warp and weft, which are usually arranged as in twill-weaving, there is also a supplementary weft, consisting of short pieces of silk, cotton, or woollen thread doubled

under the regular weft and brought to the surface in loops, which are so close together as to conceal the regular web. The loops are afterwards cut evenly, and the ends thus made constitute a covering resembling very short fur. Of velvet there are properly only two kinds,

that which is *plain*, and that with a twilled or, as it is called, *Genoa* ground or back. When the material is silk it is called *velvet;* when cotton, *velveteen*. The latter is a kind of fustian which, under a variety of names, is largely used for men's clothing. In the finer qualities, the French or Lyons velvet surpasses all others, though the English looms furnish a very good quality. Usual width, 27 inches.

To Raise the Crushed Pile of Velvet.—Hold the reverse side of the velvet over a bowl of boiling water, stretching it tight, and the pile of the velvet will be gradually raised.

VELVETEEN. (*See* VELVET.)

VENISON.— The flesh of all the different varieties of deer is called venison, but there is only one kind which is plentiful; and, as commonly used, "venison" means the flesh of the *common* or *Virginia deer*. This animal is found in nearly all the sparsely inhabited portions of the country, especially in Northern New York; but the Estern markets are supplied to a great extent from the Western States and Canada, the entire animal, with the skin on, being shipped in a frozen state. *Buck venison* is best from the 1 st of August to the 1 st of November; after the latter date *Doe venison* is preferred, and it continues good until the 1 st of January, after which no deer should be killed. It is sometimes found, however, as late as March, having kept for months in a frozen state; but it is then very high-priced. Venison is cut and sold in joints, called respectively, saddle, haunch, leg, loin, fore-quarter, and steaks; the latter should not be cut until desired for immediate cooking. Venison cannot be too fat, and if it have no fat on the back it is of very poor quality, and will be dry and flavorless. When of good quality, it is extremely nutritious and wholesome. It is not so delicate when fresh as when it has been kept from three to eight days. To know if it is fresh enough, run a knife or skewer through the leg or shoulder, and if it does not smell rank, it is good. When not consumed at once, keep it in a cool, dark cellar, with a cloth round it.

Baked Venison.—Any of the pieces used for roasting will also serve for baking. Prepare as for roasting, and lay the joint in a baking-pan with about a quarter of an inch of water in it; spread some butter over it, and bake in a rather quick oven, basting often; turn it over if necessary to brown the under side. Serve with currant jelly or cranberry sauce. Thicken the gravy in the pan with a little browned flour, and send to table in a boat. Venison must be rather underdone when baked or roasted.

Cutlets (Venison).—Trim the cutlets into a neat shape, lard them with strips of salt pork, spread a little butter over each, and broil on a buttered gridiron over a clear fire. They may also be enveloped in a piece of buttered paper and then broiled.

Hash of Venison.—What is left from a roast will answer for this. Slice the meat from the bones, and put the latter into a saucepan with the fat and other scraps; add a teacupful of cold water, a small onion minced, pepper and salt, a few sprigs of parsley and thyme, and three or four whole cloves; set on the fire and stew slowly for an hour. Strain the liquor and return in a saucepan, with whatever gravy was left from the roast, a tablespoonful of currant jelly, one of tomato or mushroom catsup, a teaspoonful of anchovy sauce, and a little browned flour; boil for three minutes, lay in the slices of venison, and heat for ten minutes, *but do not let it boil.* Stir often, and serve hot in a covered dish.

Pasty (Venison).—Cut the venison from the bones, and keep the latter with the scraps for making gravy; cut the meat into small squares or slices, put them into a saucepan with enough cold water or weak beef-stock to cover them, and stew gently until nearly, but not quite, done; line the sides (not the bottom) of a deep pie-dish with a thick crust of puff-paste; butter the bottom of the dish and lay in the venison neatly and compactly; add a good seasoning of salt and pepper, a tablespoonful of butter, and half a teacupful of the liquor in which the venison was stewed; cover with a thick crust, and set the pan in a moderate oven for a half to three-quarters of an hour. While the venison is stewing and baking prepare a gravy with the bones, fat, and scraps (a few bits of mutton will improve it), by boiling them in a half pint of water for an hour; strain the liquor, return it to the saucepan, let it come to a boil, and skim it; then add a glass of port wine, a tablespoonful of butter, the juice of a lemon, and a little browned flour; boil up once and set it where it will keep warm. When the pie is done, cut a small hole in the centre of the top crust, insert a funnel, and pour in as much of the gravy as the pie will hold. Serve the pasty very hot, and send the rest of the gravy to table with it. This is a famous dish in English cookery.

Pie (Venison).—The breast and neck will answer for this. Cut the cold meat into small pieces, season with salt, pepper, and a little ground cloves, and dredge well with flour; put them into a buttered pie-dish as close as possible, fill up the dish with the gravy from roast venison or some gravy prepared in the same manner, cover with a good crust of puff-paste, and set in a moderate oven. Bake half an hour, and serve hot.

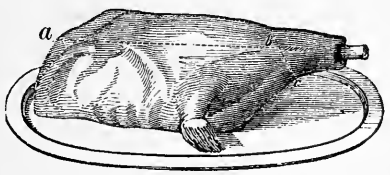
Roast Venison.—I. *Haunch.*—Remove the thin skin, after washing off in lukewarm water, and lard the joint with strips of salt pork; it may be roasted without larding, but the larding is a great improvement, the meat being naturally dry. Place it on the spit before a brisk fire, and near it; baste often, with melted butter at first and then with the drippings; if it is larded it will require less butter. As soon as a kind of crust forms on the surface of the meat, remove it further from the fire by degrees. Ascertain with a skewer or small knife when it is done; if these pass easily to the bone through the thickest part, it is ready to serve.

For gravy, put a pound or so of the scraps of raw venison left from trimming the joint into a saucepan with a quart of water, a pinch of cloves, a blade of mace, half a nutmeg, and salt and cayenne to taste; stew slowly till it is reduced one half, then strain, and return it to the saucepan with three tablespoonfuls of currant jelly, two tablespoonfuls of butter, and a wineglassful of claret; thicken with browned flour and boil up once.

Always serve currant jelly with roast venison.

II. *Neck.*—This joint is not very highly esteemed, but it makes an excellent roast when done properly, and has the advantage that it requires a shorter time to cook. Roast as directed for Haunch, allowing about twelve minutes to a pound, and serve with a similar gravy, or with a gravy seasoned simply with salt and pepper, watercress, and a little lemon juice or vinegar, and thickened with browned flour. Send around currant jelly with it.

III. *Saddle.*—A saddle of venison is much the best piece of the deer, when a very large joint is not required. Roast it as directed for Haunch and Neck, and serve with the same gravies.



Roast of Venison.

IV. *Shoulder.*—This may be cooked entire, or boned as directed for Shoulder of Veal. In either case, roast like Haunch and Neck, and serve with same gravies and currant jelly. Carve as shown in the lines, *a b* and *b c*.

Steaks (Venison).—These should be about half an inch thick. Season them with pepper and salt, spread butter on both sides, and broil them six minutes on a clear fire, turning them often. They may be served plain, but are greatly improved by a gravy made of equal parts of red wine and currant jelly, thickened with a little flour and butter; boil up once and turn hot upon the steaks. A teaspoonful of roast venison gravy, poured over them hot, is also an improvement.

Stewed Venison.—Cut the meat in two-inch squares. Put a heaping tablespoonful of butter into a stewpan and set it over a good fire; when it has melted, sprinkle in by degrees a tablespoonful of flour, stirring all the time with a wooden spoon; when it begins to get thick add two ounces of salt pork cut small, half a pint of warm water, half a pint of claret wine, salt and pepper, a pinch of allspice, two shallots, and six onions chopped fine, and, if at hand, four or five mushrooms; lay the meat on the whole, and stew gently till cooked. Dish the meat, boil the sauce hard till it is of a brownish color, turn it on the meat, and serve hot.

Stewed Shoulder of Venison.—Take out the bone as directed for Shoulder of Veal; lay in the holes thus made some slices of mutton fat that has lain a few hours in a little port wine, and sprinkle pepper and powdered allspice over it; roll it up tight and tie it with a piece of broad tape; set it in a stewpan that will just hold it, with some beef or mutton gravy (or some broth made by boiling the bones and scraps of venison with bits of mutton in water), half a pint of port or Madeira wine, and some pepper and allspice; cover closely, and simmer *very slowly* three or four hours. When quite tender take off the tape, set the meat in a dish, strain the gravy over it, and serve with currant jelly. This is an extremely savory dish.

VENTILATION.—In the article on AIR we have already shown how, in its effect on the animal economy, pure air must be regarded as a food and a highly indispensable one, and have pointed out the numerous ways in which it is contaminated after it enters a dwelling-house; but the subject is so very important, and an appreciation of its importance is so necessary to a right understanding of what is meant by ventilation, that we shall emphasize one or two additional points here. Briefly, then, the atmosphere which surrounds the earth, forming a gaseous envelope about forty miles thick, has a definite and very uniform composition. Every hundred parts of it consist of 21 volumes of oxygen and 79 volumes of nitrogen; or, if we estimate its composition by weight, of 23 parts of oxygen and 77 of nitrogen, and four parts in 10,000 of carbonic acid. Practically, we may say that a fifth part of the atmosphere consists of oxygen, and this is the true necessary of life, though without being mixed with nitrogen it would be too stimulating and could sustain life but a short time. The atmosphere also contains about four parts in ten thousand of *carbonic acid*, a gas which, unless it be highly diluted, is destructive to animal life.

This carbonic acid gas is the subtle enemy we have constantly to deal with in our houses, and against which we should be constantly on our guard. It is given off by animals in the process of respiration, both when asleep and awake. A man produces by respiration about ten cubic feet in twenty-four hours; so, if we suppose him to be confined in a room containing 1,000 cubic feet of air (which a space ten feet square and ten feet high would afford), he would, in twenty-four hours, contaminate atmosphere to the extent of one part of carbonic acid in 100 parts of air. A certain amount of carbonic acid given off by the skin would have to be added to this. But suppose twelve persons to occupy the same chamber, and a like effect would be produced in two hours. Now air containing one per cent. of carbonic acid is highly injurious, and even half that quantity cannot be long breathed with impunity. Respiration can be continued only with difficulty in an atmosphere containing five per cent. of the gas, while thirty per cent. speedily destroys life. Besides carbonic acid, the air contains

another still more deadly compound, carbonic oxide, which is produced in our houses chiefly by the imperfect combustion of carbon in fuel. Even the most perfect system of sewage and drains cannot prevent the escape of more or less sulphuretted and carburetted hydrogen; and the burning of candles, lamps, and gas-lights is a prolific source of contamination. The burning of gas is especially unwholesome, not only on account of its consumption of oxygen being very large, but because of the other deleterious gases besides carbonic acid which are evolved. In fact, as we have observed elsewhere (*See* AIR), nearly every process of household life, from cooking to mere speaking or breathing, vitiates the air to a greater or less extent.

The problem of ventilation is to remove vitiated air and supply fresh with the least inconvenience. The greatest difficulty is to accomplish this without so lowering the temperature as to induce cold, or if artificial heat alone be used, to prevent great variations of temperature in the same room, an undue dryness of the air, and too great consumption of fuel. The different means employed may be divided into two classes—forced or mechanical ventilation, and ventilation by spontaneous action. The first method is necessary whenever a larger number of persons are assembled in one apartment than its relative amount of cubic space would warrant; and elaborate preparations are often necessary to accomplish it. Manifestly these can only be employed in churches, public halls, and those private houses in which expense is no objection; but the scope of the present article is limited to showing how ventilation can best be effected in ordinary houses under ordinary conditions. The commonest and by no means the worst method of ventilating a room is by opening the windows. But since the heated and most of the impure air always ascends, windows should open at the top and extend to near the ceiling. It is a great mistake, however, to suppose that opening windows on one side only suffices to ventilate an apartment. It often happens in the still and sultry atmosphere of summer that the temperature inside a room is the same as that outside, and as difference of temperature is essential to spontaneous movement in the air, no change whatever will take place under these circumstances in the air of a room having windows only on one side. To secure good ventilation under ordinary conditions of the air, ample means of escape as well as of entrance must be provided. If the door be kept open this will generally suffice. The great objection to open windows and doors is the draught, and there are numerous contrivances to avoid it. One of the simplest is to have a portion of the window filled with perforated zinc plates or perforated glass; the draught produced by air entering through numerous small apertures is diffused and rendered less perceptible. But ventilation by this means is necessarily very imperfect. Another plan is to insert a revolving tin fan in place of a pane of glass. Ventilators made of plates of glass, which can be opened or closed after the fashion of a Venetian blind, are in every way superior to the preceding, as they do not interfere with the light, and the current of air can be directed upwards or downwards.

The mechanical expedients for securing ventilation are in most houses connected with arrangements for heating. Wherever there is a fire there must be a stream of air passing out of the room through the chimney, and as this must be replaced by air fairly well supplied with oxygen, a draught through a chimney implies openings somewhere for air to enter the room, and thus there is some ventilation as a matter of necessity. Even in summer the chimney acts as an air-shaft and for this reason it should never be closed (as it generally is) with a fireboard. In the open fireplace, the magnitude of the open space above the fire represents the ventilating capacity of the chimney. But, unfortunately, it is from the air below the level ofthe mantel—the purest in the room—that the fireplace is supplied; only so much of the foul imprisoned air above as gradually cools and descends being swept into the chimney.

Stoves afford the least ventilation of all our means of heating. They take little more air than just sufficient to consume the fuel, and that is withdrawn from the purer portion near the floor. Yet they may be made subservient to ventilation in various ways: first, by allowing air to pass through tubes in the body of the stove; second, by admitting it between the stove and external casing; and third, by simply allowing it to strike against the external surface of the stove. In either case the entering air will be partially warmed, thus avoiding the unpleasant cold draughts too often attendant on the introduction of fresh air.

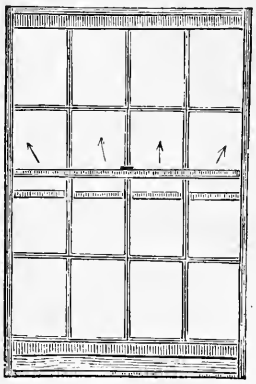
Furnaces, hot-water apparatus, etc., in which air itself is made the vehicle for conveying heat into the room, furnish the most effective means of ventilation. The hot air, by diffusion through the apartment, displaces the air already present, which must find escape somewhere. Rooms warmed in this manner require a chimney or other opening by which air may escape; but under the impression that apartments heated by air-currents require no other channel, houses are frequently constructed with no flues at all.

There are several different modes of combining warming and ventilation, both by convection and radiation, very much resembling the open fire-place in its effect upon the air, and yet securing great economy of fuel. Coils of steam or hot-water pipes are placed under the windows, and these warm the walls and furniture of the rooms, partly by radiation and partly by the air warmed on the heated surfaces of the coils. At the same time, by regulating registers, or by simply opening the lower part of the window, the pure air is admitted directly upon the coils, so that it is partially warmed before it reaches the person, and thus cold draughts are prevented. The vitiated air is

drawn off through registers both at the top and bottom of the room, opening into a heated exhausting flue, through which the constantly ascending current of warm air carries it off. Moisture should be carefully and abundantly supplied by a broad vessel placed on or close to the heated coils, providing a large surface for evaporation.

When rooms are warmed chiefly by radiated heat, the air can be borne much cooler than in those warmed by hot-air furnaces, just as a person in the radiating sun can bear much cooler air than in the shade. Where direct radiation is not used, any plan of ventilation, in order to be effective, should include an opening near the top of the room into an independent heated flue of the chimney; and if provision is made for the entrance of plenty of fresh air this alone will generally suffice to keep the atmosphere of the room pure and sweet. The upward draught in a good chimney is very strong; and in houses without independent flues, if an opening into the chimney be made by knocking out two or three bricks near the ceiling, the foul gases in the room will rush in, and, mingling with the ascending current, will escape. The only objection to these openings is that when from any cause the current of the chimney is interrupted, smoke is driven into the room. Some authorities (principally in England) claim that this is met by inserting in them *Arnott's Valve*, and call it the simplest, cheapest, and most effective mechanical contrivance that the art of ventilation has yet secured.* It is self-acting, and is so adjusted that a current of air passing into the chimney opens it, while the slightest current in the contrary direction shuts it, and thus prevents the backward flow of smoke into the room. Owing to the unsteadiness of the currents, the valve is constantly vibrating or trembling, and would be noisy but that it is made to strike against soft leather. Many of the stove or furnace-heated rooms whose foul air is a constant menace to the health of those who breathe it, may by its aid alone be thoroughly drained of their gaseous pollutions. If the orifice in the chimney be deemed unsightly, it may be screened from view by placing a picture before it. It must be said, however, that other eminent authorities object to the Arnott valve, and claim that but little benefit is gained in comparison with the dirt and smoke that is allowed to come in in spite of the valve, and that the draught of the flue is seriously interfered with in many cases. The present editors would hesitate to introduce it in this climate, after trying it on several houses. It was thought best, however, to state both sides.

One of the best and simplest methods of ventilation with which we are acquainted is described in Dr. Hinton's "Physiology for Practical Use." It is equally applicable in summer and winter, because all downward draught is avoided; and as it can be applied for a few cents, and is not unsightly in appearance, it is equally suitable for the cottage and the mansion. A piece of wood an inch or more in thickness, three inches wide, and exactly as long as the breadth of the window through which ventilation is to be established, is to be prepared. Raise the sash and place the slip of wood upon the sill of the window; then draw the sash closely down upon the slip of wood. If the slip has been well fitted—and the fitting may be made more complete by adapting it to the grooves in the sash and its frame, if there are any—no draught will be experienced in consequence of the displacement of the sash at this part. The effect of such an arrangement, however, is to cause a separation between the bars of the upper and lower sashes. By this means, perpendicular currents of air will be projected into the room between



Cheap Ventilator.

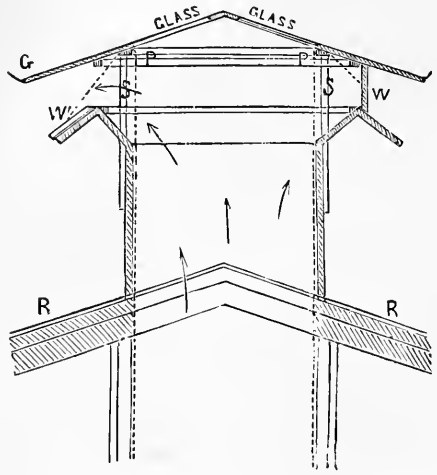
the glass in the upper and lower sashes and their respective bars, in an upward direction, and other currents will pass outward in the reverse direction, in a manner by which all inconvenience from draught will be avoided. If two windows at opposite sides of a room be fitted in this manner, a very satisfactory ventilation will be provided; owing to a difference in its equilibrium, the air will rush in on one side and rush out on the other side of the apartment. By painting the slips of wood the same color as the windows themselves, they will attract little notice. It is well too, to have their edges well covered with "listing" or felt, so as to secure tight joints.

It is very desirable to have in the ceiling of the main hall, at the top of the house, a pipe of from 8 to 12 inches in diameter, closable with a register in very cold weather, and extending far above the roof. It should, of course, be covered with a cap to shut out the rain. The top of the hall is the reservior for half the bad air in the house, which rises through the opening of the stairway from all the floors.

Another arrangement essential to a perfect house, and not very expensive if built at the

* Arnott's Valve cannot always be obtained at local stores, but it is manufactured by S. B. James, No. 77 White St., N.Y. Price $2.50 to $5.00, according to size. It is very easily inserted.

proper time, is a ventilating shaft, of which a horizontal section would be 2 square feet, or even more, to be heated either by running up beside the flue of some fire in constant use, or by registers or steam pipes at intervals, and especially near the bottom. Into this all water closets and other reservoirs of bad air should open by orifices of not less than 75 square inches. It may be large enough to use for light, in which case the covering should be of



Ventilating Shaft, Sectional View.

glass. In the sectional diagram S S represent the supports of the cover, one at each corner. They should be high enough to allow the air to escape without obstruction from the edges of the cover. R R represents the line of the roof. The opening of the shaft should project far enough above the roof (say 18 inches) to prevent snow getting down. The curved form of the under side of the cap acts as a deflector, so that no matter in which direction the wind blows, it is deflected outwards and draws the air out of the shaft. If the flue has a horizontal area of over three or four square feet, or is not very thoroughly warmed, it will be desirable, in cold weather, to close it on the windward side. For this purpose wings (W W′) should be hinged on the edges of the shaft and raised, as at W, or lowered as at W′, by cords passing over the pulleys (P P) and hanging down to some opening in the shaft where they can be controlled. The cords can be distinguished below by knots. This arrangement has satisfactorily supplied light and ventilation to a bathroom and water-closet which, before its introduction, rendered a house almost uninhabitable.

The shaft just described and all such shafts should be free from all combustible material and connections, as, being draft holes, they would be especially dangerous if fire in them were possible.

A gutter with a rain-spout at G is desirable on very large ventilators, widely opened, to prevent rain being blown down.

It must not be forgotten that ventilation is even of greater importance at night than during the day. More time is passed in the same atmosphere during sleep than in our waking hours, and the system is more susceptible to noxious influences when we are sleeping. On these accounts the ventilation of bedrooms should be carefully attended to. Unfortunately an absurd belief prevails that night air is dangerous, but it is certain that no air admitted from without is likely to prove half so perilous as that which is breathed and re-breathed by the occupant of a small and tightly-closed bedroom. (*See* CURTAINS.)

VERBENA.—Among all the "bedding-out" plants which contribute so much to the gay and brilliant appearance of a flower garden, the Verbena is entitled to the first rank; and as any one can raise them, no garden can be considered complete which does not contain some of the hundreds of varieties offered by florists. A few of the varieties are sweet-scented, but most of them depend for their attractiveness upon their showy, gorgeous coloring and their wonderful profusion of blossoms. Some splendid new varieties have been introduced within the past few years, whose wondrous stripes and eyes are not approached by any of the older sorts; these are selected from many thousand seedlings and are both rich and rare. But any one can raise new varieties from seed, and good culture will produce fine blooms. Seedlings will seed much more plentifully than flowers from cuttings, and the older the cutting the less seed it will give.

The seed should first be soaked for twenty-four hours in warm water, and then planted in a light sandy loam with a good bottom heat. Thus treated they will germinate, and when the fourth leaf is formed should be potted into thumb pots in sandy loam. The bed in which they are planted for final growth and blooming should be exposed fully to the sun, and be covered two or three inches deep with common sand. As the plant sends out its first shoots, they should be pegged down with hair pins, and thus coaxed to grow. Verbenas should be watered often and copiously. The soap-suds from washing-day are very beneficial to them, and a spoonful of guano dug around each plant, not touching the stems, will increase their vigor and beauty. The green lice, or *aphis*, is their scourge in pot-culture, but these can be destroyed by smoking them with tobacco. Put the plants together, and throw some tobacco on hot coals in a pot-saucer, cover the whole with a wash-tub, and let them smoke for ten or fifteen minutes; the lice can then be swept up and burned. Place the coals as far as possible from the plants under the tubs, so that the heat will not injure them. If plants are well showered, no lice will appear—they cannot endure moisture.

If cuttings are desired for winter bloom, they should be taken off in August, so as to become well rooted. It is not worth while to

take up old plants for winter blooming, as they never do well.

The varieties of verbenas are so very numerous that it would be useless to attempt to indicate which are most desirable. Great numbers of new ones are produced every year, and the best way is to send to one of the leading florists for a catalogue, and select from it such as strike the fancy. The qualities of a first-class verbena, as laid down by florists, are: roundness of flower, without indenture, notch, or serrature; petals thick, flat, bright, and smooth; the plant should be compact, with short strong joints, either distinctly of a shrubby habit, or a close ground creeper or climber; the foliage should be short, broad, bright, and enough to hide the stalk; in the eyed and striped varieties the colors should be well defined and lasting, never running into each other or changing in the sun.

VERMICELLI.—A preparation of wheat flour very similar to Macaroni, being made in the same way, only to the paste are added cheese, yolk of eggs, sugar, and saffron. It is of Italian origin, and the name means little worms, from its form. Vermicelli should be of a slightly yellowish color; those which are white are of inferior quality. It should also be fresh, as it becomes musty when long kept. The Italian is best. (*See* PUDDINGS and SOUPS).

VERMIN.—For directions how to destroy the various kinds of vermin that infest the house, *See* ANTS, BUGS, COCKROACHES, FLIES, MICE, RATS, and ROACHES.

VERONICA.—This is a well-known hardy herbaceous plant, which is found in most gardens. Cultivate as directed for PHLOX. *Veronica Verginica* is the common tall-growing species, producing white flowers in August. *V. speciosa* and *spicata* are of dwarf habit; they produce fine blue flowers in June.

VERTIGO.—Vertigo, or GIDDINESS, is that peculiar sensation wherein we seem to be standing still and all adjacent objects running round us. This commonly causes loss of balance, and the individual may fall down; in a good many cases, however, he is able to recover himself without falling, especially if he can lay hold of something to steady himself by for a moment. In most cases giddiness depends on an insufficient or improper supply of blood to the brain. Thus in giddiness after severe illness, in attempting to stand upright we see the result of an insufficient supply; in other instances the blood supply is impure from containing too much alcohol or the products of imperfect digestion of food. In old people, when the vessels become hardened and unyielding, giddiness is often a permanent symptom. From these facts it is evident that vertigo is rather a symptom than a malady, and a symptom, too, of varying significance; for sometimes apparently overfullness of the blood-vessels gives rise to a kind of giddiness. If, for instance, the face is flushed and the head hot, it may be desirable to give some purgative medicine, whereas if the vertigo comes during convalescence, it is best remedied by a glass of wine. The subsequent treatment depends upon the same principle. Where there is weakness, good food and exercise are the best remedies; when overfullness seems to be the cause, saline purgatives and some diuretic may be given.

VINEGAR.—This well-known condiment is a weak acetic acid, of different degrees of strength, and either brown or colorless, according to the source from which it is produced. The simplest way of obtaining it is to set up a second or acetous fermentation in wine or cider, by leaving the vessel unstopped in a warm place, oxygen is absorbed, carbonic acid evolved and the alcohol of the wine passes into acetic acid. The best vinegar is *wine vinegar*, but it is expensive. *Cider vinegar* is excellent, and for ordinary use superior to any other. Beer makes good vinegar, but it is inferior to that made with cider. *Pyroligneous vinegar*, made by the distillation of wood, is apt to be impure, and, if used, should be used only in pickles for preserving meats, etc. For this purpose it is said to be superior to any other. Vinegar of excellent quality and at a moderate price may now be obtained at the stores in every part of the country, so that it is no longer necessary to make it at home; but the following receipt will produce it at small cost and with little trouble: To one gallon of water add one pound and a quarter of raw sugar and a quarter of a pint of yeast. At a temperature of 80° it will be sufficiently acid in three or four days to be drawn off, when an ounce of cut raisins and an equal weight of cream tartar should be added; in a few weeks the sweet taste will have disappeared entirely, and the vinegar may be bottled.

Flavored Vinegars are growing in favor as condiments; those for which receipts are given below are easily made and very choice.

Cayenne Vinegar.—Put from a quarter to half an ounce of the best cayenne pepper into a bottle, and pour on it a pint of strong vinegar, cork it closely and shake it well every two or three days. It may remain any length of time before it is poured off, but will be ready for use in two weeks.

Celery Vinegar.—Throw into a pint of boiling vinegar a few grains of cayenne, or half an ounce of peppercorns, a large saltspoonful of salt, and a pint of the white part of the roots and stems of some fine fresh celery, sliced thin; let it boil for two or three minutes, turn it into a stone jar, and secure it well from the air as soon as it is cold. It may be strained off and bottled in three or four weeks, but may remain as many months in the jar without injury.

Chili or Capsicum Vinegar.—Put an ounce of chilies or capsicums into a pint of vinegar, cover closely, and let them stand a fortnight; after straining, it will then be ready for use. If a strong flavor is liked, let them infuse for a fortnight longer.

Cucumber Vinegar.—First wipe, and then, without paring, slice into a stone jar some young

cucumbers, pour on them as much boiling vinegar as will cover them well, with a teaspoonful of salt and two-thirds as much peppercorns to a pint and a half of vinegar. It may remain on them for a month, or even for two, if well protected from the air; it should then be strained, allowed to settle, and poured quite clear into small dry bottles, which should be tightly corked. A mild onion may be mixed with the cucumbers when its flavor is liked.

Horseradish Vinegar.—On four ounces of young and freshly scraped horseradish pour a quart of boiling vinegar, and cover it down closely. It will be ready for use in three or four days, but may remain for weeks or months before the vinegar is poured off. An ounce of minced shallot may be substituted for one of the horse radish, if the flavor is liked.

Mint Vinegar.—Slightly chop or bruise the young leaves of freshly gathered mint, and put them into bottles, filling them nearly to the neck; pour in vinegar enough to cover the mint; in fifty days strain it off and bottle for use.

Onion Vinegar.—Make as directed for shallot vinegar.

Raspberry Vinegar. (*See* RASPBERRY.)

Strawberry Vinegar.—Take the stalks from the fruit, which should be quite ripe and freshly gathered in dry weather; weigh it and put it into large glass jars or wide-necked bottles. and to each pound pour about a pint and a half of white wine vinegar; tie a thick paper over them, and let the strawberries remain from three to four days; then pour off the vinegar and empty them into a jelly-bag, or suspend them in a cloth, that all the liquid may drop from them without pressure; replace them with an equal weight of fresh fruit, pour the vinegar upon it, and three days afterwards repeat the same process, diminishing a little the proportion of strawberries, of which the flavor ought ultimately to overpower that of the vinegar. In from two to four days drain off the liquid very closely, and after having strained it through a linen or flannel bag, weigh it and mix with it an equal quantity of highly-refined sugar roughly powdered; when this is nearly dissolved, stir the syrup over a clear fire until it has boiled for five minutes, and skim it *thoroughly;* pour it into a clean stone pitcher, or into large china jugs, throw a thick folded cloth over and let it remain until next day. Put it into pint or half-pint bottles, and cork them lightly with new velvet corks; for if these be pressed in tightly at first the bottles will sometimes burst; in four or five days they may be closely corked and stored in a dry and cool place. Damp destroys the color and injures the flavor of these fine fruit-vinegars, of which a spoonful or two in a glass of water affords so agreeable a summer beverage, and one which in many cases of illness is so acceptable to invalids. They also make excellent sauces for common custard, batter, and various other light sweet puddings.

Raspberries and strawberries mixed will make a vinegar of very pleasant flavor. Black currants also make an agreeable one.

Shallot Vinegar.—On from four to six ounces of shallots, peeled and bruised, pour a quart of good vinegar; stop the jar or bottle close, and in a fortnight or three weeks the vinegar may be strained off for use. A few drops will give a sufficient flavor to a sauce or to a tureen of gravy. *Garlic vinegar* may be made in the same way, using only half as much garlic as of shallot.

Tarragon Vinegar.—Gather the tarragon just before it blossoms; strip it from the larger stalks, and put it into small stone jars or wide-necked bottles, and in doing this twist some of the branches so as to bruise the leaves and wring them asunder; then pour in enough very pale vinegar to cover the tarragon; let it infuse two months or more, then pour it off, strain it, put it into small dry bottles, and cork them well. This is an excellent sauce.

VIOLET POWDER.—A lady's toilet is not considered complete without this or some other absorbent powder. It not only dries the skin, but also tends to give a smooth surface and conceals pimples. The following is its composition, and any lady can, if she please, make it for herself: Wheat starch, six parts by weight, orris root powder, two. Having reduced the starch to an impalpable powder, mix thoroughly with the orris root, and then perfume with otto of lemon, otto of bergamot, and otto of cloves, using twice as much of the lemon as of either of the other ottos.

VIRGINIA CREEPER.—This rapid growing vine, is very useful in covering walls and fences or any unsightly spots in the garden. It is beautiful in the autumn time when in full foliage and flower, and as it is hardy, except very far north, and requires very little attention, it should find a place in every garden. The cultivation is the same as that of the honeysuckle, consisting of putting the seed into the ground in the spring and watering rather freely during the hot dry days of summer.

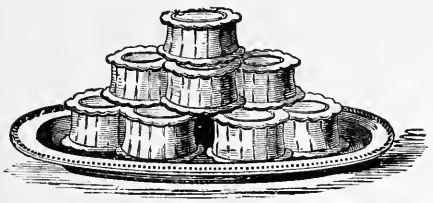
VOMITING.—The causes of vomiting are very various—irritation of the stomach itself, whatever be its origin, will give rise to ejection of its contents; but vomiting occurs in many other maladies. When gall stones or small urinary calculi are passing there is usually sickness and vomiting: in Bright's Disease there is vomiting also, and in brain affections among children vomiting is an invariable symptom.

To arrest vomiting, ice, swallowed in lumps a little larger than peas, is an excellent remedy. Bismuth is good, especially with small doses of opium. So, too, are all effervescing drinks. In all cases, the quantity of the remedy used should be small; bulky preparations will most probably be rejected.

VOLS-AU-VENT.—These are raised pies, made with very light and rich puff paste instead of that used for the raised pies, or it may be considered as an enlarged and highly ornamented patty. There is considerable art in making and baking these cases, as they are put into the oven without their contents, and then filled with them afterwards. The paste is made to

line a fluted dish or tin, and baked till it is of a fine light brown; but few cooks can understand how to make it without actual demonstration.

Roll out some of the lightest puff-paste to a half-inch of thickness, and with the larger of the tins



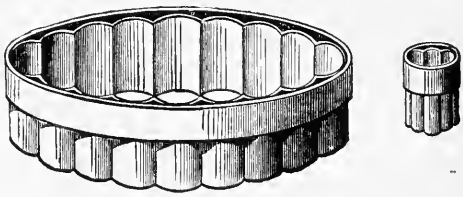
Small Vols-au-Vent.

cut the number of patties required; then dip the edge of the small shape into hot water, and press it about half through them. Bake them in a moderately quick oven from ten to twelve minutes, and when they are done, with the point of a sharp knife, take out the small rounds of crust from the tops, and scoop all the crumb from the inside of the patties, which may then be filled with shrimps, oysters, lobster, chicken, pheasant, or any other of the ordinary varieties of patty meat, prepared with white sauce. Fried crumbs may be laid over them instead of the cover, or these last can be replaced.

For sweet dishes, glaze the pastry and fill it with rich whipped cream, preserve, or boiled custard; if with the last of these, put it back into a very gentle oven until the custards are set.

A la Cream Vol-au-Vent.—After having raised the cover and emptied the *vol-au-vent*, lay it on a sheet of paper and let it become cold. Fill it just before it is sent to table with fruit, either boiled down to a rich marmalade or stewed as for the next receipt, and heap well flavored, but not too highly sweetened, whipped cream over it. The edge of the crust may be glazed by sifting sugar over it, when it is drawn from the oven, and holding a salamander or red-hot shovel above it; or it may be left unglazed and ornamented with bright-colored fruit jelly.

Fruit Vol-au-Vent.—After the crust has been made and baked as above, fill it at the moment of serving with peaches, apricots, mogul, or any other richly-flavored plums which have been stewed tender in syrup; lift them from this, and keep them hot while it is boiled rapidly almost to jelly; then arrange the fruit in the *vol-au-vent* and pour the syrup over it.



Moulds for large Vols-au-Vent.

Skin and divide the apricots and quarter the peaches, unless they should be very small. (*See* treatment under ENTREES.)

W.

WAFERS.—Take a pound of flour, two tablespoonfuls of butter, and a little salt, and mix them with milk into a stiff dough; work well, roll out thin, and cut into round cakes, and then roll these as thin as they can be handled; lay them very carefully into a floured baking-pan, and bake in a quick oven.

Rice Wafers.—Melt a quarter of a pound of butter and mix it with a pound of rice-flour, a teaspoonful of salt, and a wineglassful of wine; beat four eggs and stir in, together with just enough cold milk to make the dough roll out easily; it must be rolled out as thin as possible, cut with a wineglass into cakes, and baked in a moderate oven on buttered flat tins.

WAFFLES.—The circular waffle-iron, that bakes four waffles at once, that turns with the mere touch of a fork and that is used on the stove or range, has taken the place of the cumbrous utensil of former days.

Scald one quart of milk; add to it ten ounces of butter, and, when lukewarm, mix in a pound and a quarter of flour and one gill of home-made yeast; allow six hours for rising. Just before baking, beat the yolks and whites, separately, of four eggs—the whites to a stiff froth—and stir them in the batter. Grease the irons well each time.

Heat the iron, grease and fill it about two-thirds (leaving room for the batter to rise); when the waffles are brown on the lower side, turn the iron; when done, butter and leave them in the mouth of the oven until another layer is ready, when they should be served immediately. They are eaten with powdered sugar and cinnamon sifted together.

Quick Waffles.—Sift together one pound and four ounces of flour, and five even teaspoonfuls of baking powder; add a pint of milk, half a teaspoonful of salt, two ounces of softened butter, and four eggs; beat until light; then add gradually a pint of milk, and bake as in the above receipt.

Rice Waffles.—Take a teacupful and a half of boiled rice, set it over the fire with a pint of milk, and mix it smooth; then take it from the fire; and add a pint of cold milk and a teaspoonful of salt; beat four eggs and stir them in, together with enough wheat flour to make a thin batter.

Rice and Corn-meal Waffles.—To a pint of cold boiled rice and half a pint each of flour and corn-meal add three beaten eggs, two tablespoonfuls of melted butter and enough milk to make a soft batter; add also a teaspoonful of soda, dissolved in a little hot water, and a heaping teaspoonful of salt. Beat the batter very smooth.

WAIST (Dress).—That the reader may clearly understand the method of cutting this pattern, we shall give the drawing in separate portions at first, following the order of the measurements (See CUTTING and FITTING), and afterwards the whole pattern.

To commence with the fronts: Upon a square of strong paper of suitable size draw the vertical line *a b* (Fig. 1); this represents the line

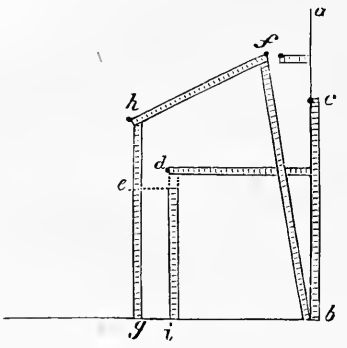


Fig. 1.

on which the buttons are placed. Also draw the horizontal line *g b*, intersecting the former at the point *b*; this represents the waist line.

Having drawn these preliminary lines, we mark the different measurements in the following order:—*

Length of the Front of the Waist (III.).—Place one end of the tape measure in the angle *b*, and carry the tape up straight and mark the length at a point we will indicate by *c*.

Breadth of the Chest (IV.).—Place the measure against the line of the front *a b* at a point about two-thirds up from the horizontal line representing the waist, and carry it to the left, marking the half length at the point *d* (and it is to be understood that in speaking of the chest measure we refer to the half).

Length Under the Arm (V.).—Placing the measure under the waist at the point *i*, directly under the point *d*, carry it up straight to ascertain if the breadth of chest was marked at the proper height; its true place should be a seam's distance, a scant half-inch, that is, above the top of this line. Then we remove the under-arm measure to the left to a distance indicated by the fourth of the chest-measure, and mark the point *e*.

First Height of Shoulder (VII.).—We take the half of this measure, place one end in the angle *b*, and carry it up obliquely to the left in such a manner that from its extremity, *f*, one-sixth of the neck-measure (XV.), carried in a straight line to the right, will touch the line *a c*. The point *f* is, however, to be marked half an inch further to the left, to make the dress easy in the neck.

Second Height of Shoulder (VIII.).—Take half of this measure, place it on the waist line at the point *g*, above the under-arm measure, and carry it straight to the shoulder, marking the point *e*.

Length of Shoulder (XIV.).—This measure is placed obliquely between the points *f* and *h*, that is, the first and second heights of shoulder; it serves also to verify the proper distance at which should be marked the second height of shoulder. Between these points the out-

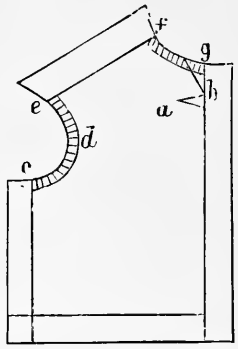


Fig. 2.

lines of the waist are drawn thus (Fig. 2): A curved line between the points *f g* indicates the neck; an oblique line between the points *f e*, the length of the shoulder; an oblique line from *e* to *d*, thence curving to *c*, gives the arm-size; a straight line from *c* to the waist, gives the line under the arm.

The pattern being thus outlined, we verify the arm size by applying half the measure (IX.), and the neck by a third of the measure (XV.).

In cutting out the paper pattern we go exactly by the lines drawn, leaving no margins; but in cutting the material for the dress we leave on the shoulder two inches margin; in front, under the arms, and at the waist, an inch: while the neck and arm-size we cut exactly by the pattern. See Fig. 2.

In cutting, lay the pattern the straight way of the cloth, unless specially directed otherwise. The lining is to be folded double, the selvages coming in front, and the two fronts thus cut out at once. After laying the pattern upon the lining, trace the outline with chalk or a pencil accurately, then, in cutting, make the allowances enumerated above. After a little practice, a person will dispense with the paper pattern and draw from the measurements directly upon the lining. After cutting out the two fronts, they should be creased in the lines of the pattern that the half lying beneath may have the outlines marked, and they should be at once drawn with pencil or indicated with a basting thread.

* For explanation of Roman numerals, *See* CUTTING and FITTING.

The waist here described is round, but a pointed waist requires only that the material necessary to form the point be folded under, and afterwards cut to whatever length is desired.

In Fig. 2 are represented two little plaits, *a* and *b*, at the top of the waist, which are made in the lining, but not in the outside of the waist, for the purpose of giving it a neater and more clinging fit at a point where, without this precaution, awkward creases are apt to be found. The horizontal fold *a* will take up perhaps a third of an inch. This must be made first. The vertical plait is smaller (as represented in Fig. 2, these plaits appear much larger in proportion than they really are). The stouter the person the larger these plaits require to be, as will be readily seen by experiment, but no one can dispense with them entirely.

The lining being now entirely ready, we apply the outside by a basting thread, following the outlines of the pattern, and then cut to match the size of the lining.

The Darts.—(Fig 3.) * To make the darts where they should be, we take a third of the chest-measure, apply one end to the angle where the front and waist line meet (exclusive

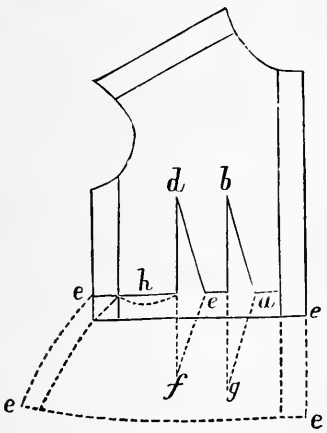


Fig. 3.

of margins), and mark the point (the dot to the left of *a*) as the base of the first dart. The height of the dart falls two inches below the arm-size. Now take up the plait, as shown in the figure, straight down from the point *b* on the side towards the back, and obliquely to *a*, on the front. Measure again a third of the chest-measure from this dart to the outer side of the second, and take up the second dart. These darts should be nearly of the same length; the one nearer the arm may be a little longer; if the figure to be fitted is very short, they must both be somewhat shorter than we have here represented them. (See Fig. 7.)

After the darts are taken up, we verify the size of the waist by comparing with the waist measure (VI.), of which it should be one fourth; that is to say, the two fronts and the two halves of the back evenly divide the waist measure, giving a fourth to each. If, on measurement, the fronts prove too narrow around the waist, we diminish the size of the darts, still observing the same proportions.

In round waists, the darts are made straight, as we have shown, but in pointed waists they are carried down into the point.

We now come to the preparation of the back, concerning which a preliminary caution should be given. Whether we draw the pattern upon the lining folded double, or cut by a paper pattern laid upon it, care must be taken to have the fold, *and not the selvages*, come in the middle, so that we shall cut the back out in one piece, and not in two.

In designing the pattern of the back, the first step is to draw a vertical line representing the middle, and a horizontal line representing the waist, as was done in designing the fronts.

Length of the Back (XII.).—This measure is to be marked from a point, *c*, an inch above

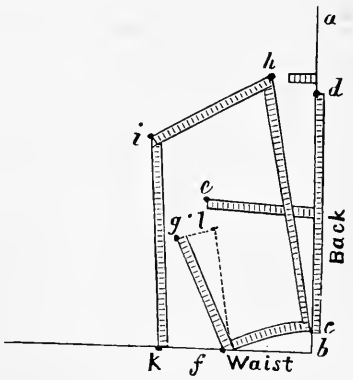


Fig. 4.

the waist line, and we will represent its upper extremity by the point *d*.

Breadth of Back (XIII.).—Place one end of the measure about the middle of the back, *c d*, and mark the point *e*. (This measure should be, of course, half the entire breadth.)

Size of Waist (VI.).—Take one fourth the waist-measure, apply one end at the point *c*, and carry it obliquely to the horizontal line, making its extremity *f*.

Length under the Arm (V.).—Place one end of the measure at the point *f*, and carry it straight up to ascertain if the measure of the breadth of the back has been placed at the proper height. It should be a half inch above the point *l*. Then, keeping the lower end of the measure in its place, *f*, move the other end to the left obliquely as far as the point *g*, which should be distant from *l* a space equal to one-fourth the breadth of the half back.

First Height of Shoulder (VII.).—Take half the measure, place one end at the point *c*, and carry it up a little obliquely to a point, *h*,

* The straight lines in this figure are all that we are concerned with at present. The dotted lines represent the outlines of a basque, which is explained elsewhere.

which is fixed by taking one-sixth of the neck measure, placing it against the vertical line *a b*, a little above the point *d*, and directing it towards the left. The point *h*, however, will be removed a scant half-inch farther to the left, as was done in the corresponding measure of the front.

Second Height of Shoulder (VIII.).—Take half the measure, place one end at a point, *k*, on the horizontal line, carry it straight up to *i*, verifying the position of this point, and consequently of *k*, by applying the measure for the length of shoulder (XIV.) between *h* and *i*.

These measures being indicated, we draw the outlines from point to point, and we have thus the pattern as represented, Fig. 5.

A pattern may be reduced in size by taking each of these measures shorter, the relative lengths being unchanged, and the line of the middle remaining in the proper place.

In cutting out the lining for the back, we leave an inch margin at the waist and under the arms; the shoulder, as well as the neck and arm size, are to be cut on the pattern exactly. The

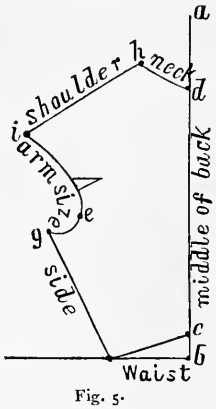


Fig. 5.

line of the middle of the back is to be laid on the fold of the material. It is necessary also to take up a little plait on the edge of the arm

Fig. 6.

size, as shown in Fig. 5, to avoid the extra fullness which otherwise will be observable. We then baste the lining upon the material and cut the pattern out to match.

Forms.—The outside and lining being basted together, we draw a line, *a b* (Fig. 6), from the middle of the arm size to the waist, curved, as shown in the figure; to match the sides exactly, after drawing this line for one side, we double the waist together down the back, and baste with small stitches one-half the back down upon the other, following the line of the form already drawn. Then cutting the thread between the sides, the stitches will remain on the other half, enough to guide in drawing the second form. We then fold over a little seam, as small as possible, on these lines, and stitch it. If desired, the forms can be cut out separately from the outside merely, and stitched down, and in making a pointed waist this method must be employed.

The fronts and back being thus prepared, they are put together in the following way: under the arms the seams are made as the pattern indicates; on the shoulders, the seam

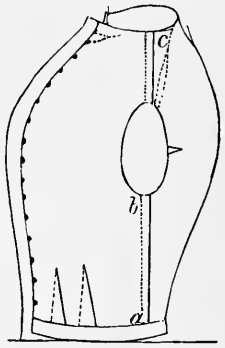


Fig. 7.

should fall further back. (See Fig 7.) To this end, we carry the front over as far as the wide margin that was left will allow, and of course reduce correspondingly the back. This gives breadth and elegance to the waist.

The shoulders and under-arm seams being basted together, the waist may be tried on and any needful alterations made. But where the cutter has even a little experience, it becomes almost needless to try on, as, the measures being accurately taken, and the seams made on the exact lines of the pattern, it is almost impossible to fail.

We have now to mark the places for the buttons and button-holes. We fold back on the inside the extra inch left on the right front and cut the button-holes through the doubled outside and lining, sometimes cutting away one thickness of the lining if the material is heavy. The buttons are to be put on the left front, just at the middle line of the waist, and the inch margin will cross under the button-holes, so that the white clothing underneath may not be seen through them.

Where hooks and eyes are used instead of buttons, the inch margin on the left side is to be folded back, then the eyes sewed on at regular intervals and a strip of the same material as the waist stitched on behind them. The

hooks are put on to a strip of strong linen, which is secured along the inside of the right edge, the extra inch having been folded back and the holes so far set in that when the dress is fastened they will be concealed from sight.

The waist, being firmly sewed together, should be faced, or have a piping cord sewed around the neck, arms, and waist, and, if desired, places are stitched under the arms, in the darts, and in front for whalebones, which should be secured at top and bottom.

Waists with *revers* (Fig. 8) are cut by leaving a sufficient quantity of material, *a*, to fold back when the waist is fastened. This is more

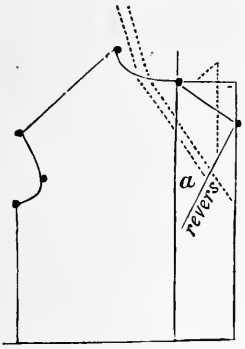


Fig. 8.

or less, according to the size desired for the *revers*. They may fold back a little distance or all the way from the bottom of the waist, which then requires a vest or chemisette underneath; also they may be continued around the neck, as indicated by the dotted line in the figure, like a man's coat collar. The *revers* should be lined, and usually with silk, either black or some color suitable to the color of the dress. The *revers* may be cut on one side only and be folded across and button down on the other side, usually narrowing to the waist. In this case a corresponding row of buttons is usually added on the other side.

Low-necked waists may be cut from the directions given in this section by making the following variations: the length of the middle of the waist is decreased, and instead of being taken from the base of the neck, is measured from whatever point is desired as the height of the waist in front; there is no need of taking the first height of the shoulder, nor the measure of the neck, nor the length of the shoulder; and there must be more or less curve from the shoulder to the middle of the front. In all other respects the pattern is the same.

The sleeve of a plain waist is usually the PLAIN COAT SLEEVE, Fig. 9. To draw this pattern, we begin with a horizontal line, *a b*, near the top of the paper. On this line we indicate half the measure of arm-size, *c d*. Then place the measure of the length of the arm between the points *d* and *e*, the latter being somewhat to the right and requiring the line to be slightly curved in its lower third. Draw this line, and for the outside draw a line commencing two inches above the horizontal line *a b* at the point *f*, which shall be straight as far as the point *g*, which indicates the middle of the inner line, *d e*; then curving to correspond with the inner line, and being prolonged about an inch beyond it to the point *h*. An oblique line from *h* to *e* indicates the bottom of the sleeve measured by the size of the wrist (XI.). For the top there

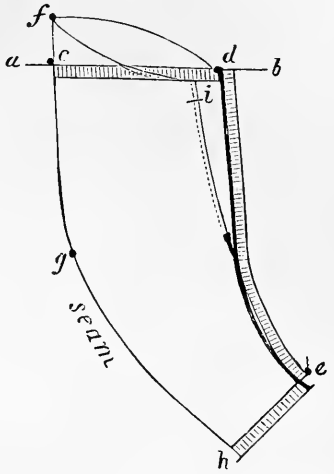


Fig. 9.

are two outlines, as shown in the figure, the upper side of the sleeve being longer than the under. Frequently the under side of the sleeve is also cut narrower from the top of the sleeve as far down as the elbow, as shown by the line *i* in the figure. The sleeves, being stitched up and finished by a hem or a facing at the wrist, are stitched into the dress, bringing the inner seam of the sleeve at that point of the arm-size where the measure of the breadth of the chest was placed when the waist was cut.

For the gathered or bishop's sleeve, see the Blouse Waist below.

Waist (Basque and Basquine).—In preparing the pattern of a basque waist, we fold under a length sufficient for the basque and then design a plain waist according to the directions given above. This being done, we lay the paper open and design the basque as follows (See Fig. 5, above). We prolong the line under the arm obliquely to the left, allowing an inch of width for every three inches of length. Also prolong the line of the front to the length desired for the basque. The lining and outside being basted together, the dart will be taken up as for the plain waist, but they will be carried below the waist line, narrowing to a point, the first dart being prolonged 2½ or 3 in. below the waist, and the second an inch less. Also the buttons should go a little below the waist.

The back is represented by Figs. 10-11, which, it must be remembered, are the guides for preparing the paper patterns, and the piecing re-

quired in Fig. 11 exists only in the paper. The forms, however, must be cut separate, as will readily be seen.

The back is designed as for a plain waist, the line *a b*, Fig. 10, coresponding to the line *f c*, Fig. 5, the paper having been folded under as in preparing the front. The waist being outlined, we unfold the paper, and draw an oblique line from *a*, Fig. 10, to correspond with the

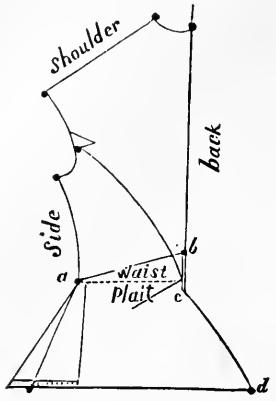


Fig. 10

front in length but a little more sloped. We then draw the line for the form which is prolonged a scant inch below the waist line *a b*, and then carried on to the bottom of the basque with a slope of an inch width to every three inches of length. Thus we give suitable fullness to the basque in the back; thus, however, *in the pattern*, we cut away the middle of the back below the waist, and thus require the piecing shown in Fig. 11, which being made we finish out the back as represented. The basque waist, when cut in the material, is then in five pieces, two fronts, two forms, and the middle of the back, and is put together, first the forms being basted to the back, and then the fronts being added, beginning all the seams fit the arm hole, and if seams do not come out even, pare off as needed at the neck and the lower edge. It must, however, be noticed that a little plait is taken up around the waist on each side, beginning at the seams which unite the forms to the back, and carried to the second dart; this prevents wrinkles about the waist.

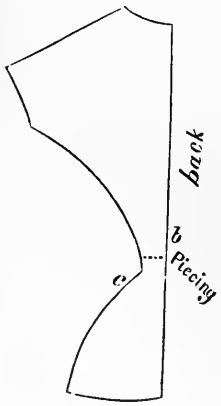


Fig. 11.

The shape of the basque may be varied in countless ways. It may be cut of unequal lengths in its different parts; it may be cut very full in the back and laid in plaits larger or smaller; the seams below the waist may be left open and faced and turned over in *revers*.

The *basquine* is an outside garment made on the same pattern as the basque, only prolonging the part below the waist to the desired length, observing the same proportions. There is also a loosely fitting basquine, of which we repre-

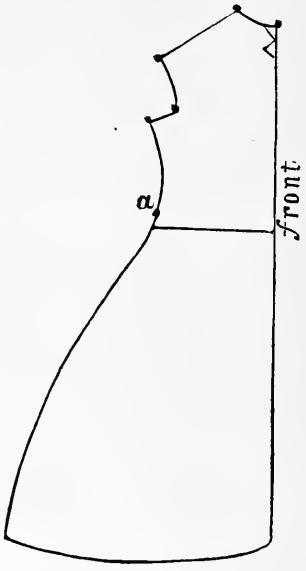


Fig. 12.

sent the front in Fig. 12, the back being still made exactly after the pattern represented by Figs. 10-12. This front has no darts, but is hollowed out a little in the side line *a*; and both front and back are made from half an inch to an inch shorter waisted than the dress-waist.

The sleeve of the basquine is often the plain coat-sleeve (Fig. 9, above); but a more open sleeve is at times in fashion, the flowing or pagoda sleeve, as it has been called. This is made by a very simple variation on the coat-sleeve pattern as follows: the sleeve has no seam in the back, but the outer edge of the pattern comes on the fold of the material, (frequently the *bias* fold); at the top the flowing sleeve is exactly the same as the coat-sleeve, but from *g* down it falls straight. This of course gives a wide opening to the sleeve which is wider in proportion to the length to which the outside is prolonged. Also the inside seam may be made more oblique, thus widening at both sides.

The loosely fitting basquine is a favorite outside garment for children, who are measured for it precisely in the same way as grown persons are.

WAIST (Blouse).—These waists are gathered or plaited in front or back, or both, and for this reason require to be cut larger. They are also known as French waists, and are par-

ticularly suitable for children and persons of slender figure.

In designing the fronts we draw first the pattern of the plain waist. We then take the second height of shoulder (viii.)* and remove it, on the front, to a position about 5 in. further to the left than in the plain waist, and make it top

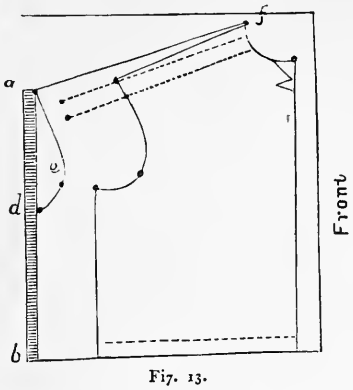


Fig. 13.

and bottom, (Fig. 13.) This increases the shoulder-length and makes room for gathers or plaits (Fig. 14.) The back is designed after

Fig. 14.

the pattern of the plain waist, only removing the line under the arm further to the left at and above the waist, retaining it in its place where it meets the arm-size. (Fig. 15.) The back, of course, requires no forms.

The lining of this waist follows exactly the pattern of the plain waist, the plaits or gathers being made only on the outside.

A second variety of plaited waist is made by laying plaits in the material, three large ones or five smaller, for front and for back, and then cutting it out by the pattern of the plain waist, having of course, neither forms nor darts, but narrowing it suitably at the waist, according to the waist-measure (vi.) taken loosely, by slanting inwards the seams under the arms.

* For explanation of Roman numerals, see Cutting and Fitting.

Still another waist is made with a yoke (Fig. 16-17.) This is designed from the pattern of a

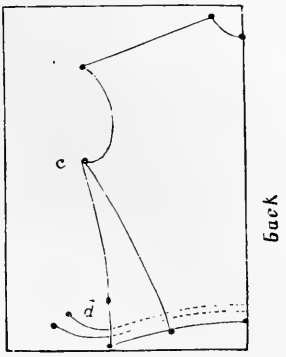


Fig. 15

plain waist as follows: We draw the shoulder and neck and arm size, and the line of the front,

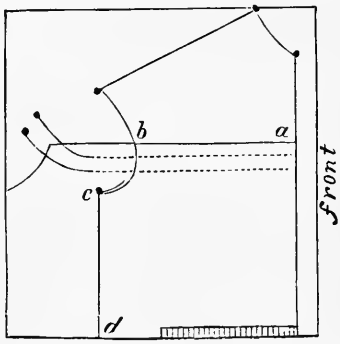


Fig. 16.

the extra width of paper or material being at the left; we then draw the horizontal line *a b*

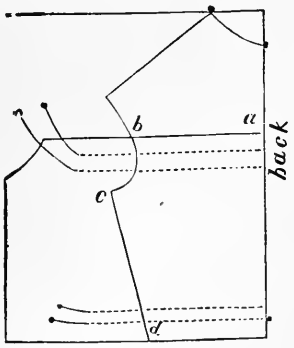


Fig. 17.

across the pattern, crossing the arm-size at about the middle, we cut away what is above this line for the yoke; the outline of the rest of the arm-size and the under-arm seam removed as far as desired to the left completes the lower part of the waist. We should allow twice or thrice the width suitable for a plain waist in making these gathered waists.

The yoke and its lining being put together, the lower parts are gathered and sewed in be-

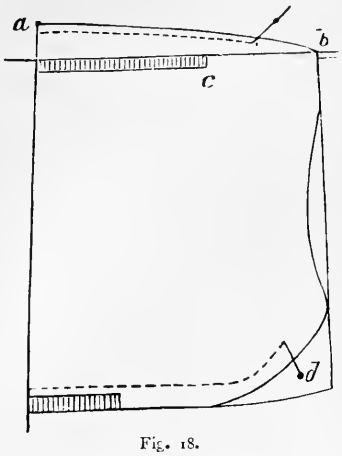


Fig. 18.

tween them, and a row of trimming frequently conceals the edge of the yoke. All these waists are made with a belt, and, especially for children, it is suitable to attach the waist to the skirt by buttons and button-holes.

Wrappers are made by a modification of this pattern, and also infants' dresses: that is to say, the yoke is cut by the plain waist pattern, and then the material is gathered on and falls to the required length, the waist and skirt being one. A drawing-string may be put in to indicate the waist, or the garment may be left entirely loose, or else confined by a ribbon or a belt.

The sleeve suited to these waists is the gathered sleeve (Figs. 18-19.) It is cut from a piece of the material folded double, the straight way of the cloth in all materials that are to be washed, although in woollens or silk it may be taken bias. The upper edge *a b* is drawn as is that of the plain coat-sleeve (Fig. 9, above); but taking in the whole width of the sleeve, which should be about twice that of the plain sleeve. We determine the length by the measure of the arm, then cut off corner *d* from the bottom of the inner side and hollow out that inner side a little.

Fig. 19.

These sleeves are gathered or plaited at top and botto m to bring them to the size of the arm and of the wrist, leaving at top and bottom a little space plain, about an inch, perhaps. They are then set on to a cuff of whatever depth is preferred.

These sleeves may be varied by putting on a binding longer than the wrist measure, and made to go over the hand; or by making them with puffs or tucks lengthwise; or by gathering them at the top only, and cutting them away to fit closely at the wrist like the plain coat sleeve.

WAKEFULNESS. (*See* SLEEPLESSNESS.)

WALNUTS.—These excellent nuts, when ripe and with the husk off, are round, black, and very rough; the kernel is large, peculiarly sweet and agreeable in flavor, and wholesome. They are found fresh in the market during the fall, but keep many months and improve with age. The immature fruit, in the tender green outside shell, before the internal shell becomes hard, makes a good pickle.

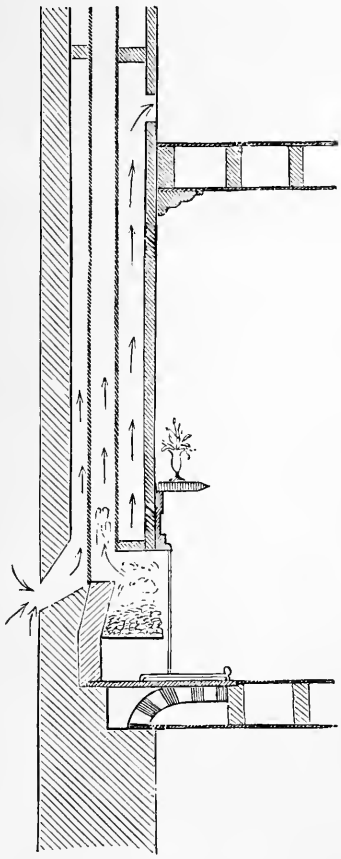
WARDIAN CASE.—A close glass case, placed upon a trough or pot containing earth and accurately fitted to it, intended for the growth of plants in the windows of apartments. These cases are now made of every size and style, from the little bell glass for growing the dwarf ferns, to the large structures filling the entire end of a room. Some of the larger cases, in fact, are simply hot-houses on a small scale, being heated, drained, and ventilated on precisely the same principles as the latter. Almost any kind of flowers can be raised in them in a perfection unapproached by the ordinary methods; and the finer species of ferns can be grown satisfactorily in no other way. As the management of Wardian cases depends upon the kind of flowers grown in them, it would only mislead if we attempted to lay down any general rules. The conditions mentioned under each flower as conducive to its vigor apply to this as well as to ordinary methods of flower-culture.

WARMING.—The warming of houses by artificial means is a subject so complicated with that of ventilation that the two must always be studied in connection. The combustion of fuel in a closed or practically closed place, not only generates heat, but has a very important effect upon the quality of the air breathed. A room so cold that the body is constantly parting with its heat is of course highly injurious to health; but, on the other hand, the room may be warmed under such conditions as will render its atmosphere even destructive to life. The reason of this is that the process of combustion not only generates certain noxious gases which must be drawn off as rapidly as they are produced, but consumes the oxygen of the air in large quantities; and as we have explained in the articles on AIR and VENTILATION, oxygen in a certain definite proportion is necessary not only to the preservation of health, but to the support of life itself. The effect therefore of any special device for heating upon the air itself is a most important point to be considered not only in reference to warming but also to ventilation.

Instead of discussing here in general terms the theory of heat, we shall consider its practical applications to the various modes of warming and the apparatus employed therefor. These are: 1st. open fires; 2nd, grates; 3rd, open stoves; 4th closed stoves; 5th, hot-air furnaces; 6th, hot-water pipes; and 7th, gas stoves.

Open or wood fires.—Warming by an open fire, whether by wood or coal, is near-

est to the mode of Nature. The sun heats the earth by direct *radiation*, and the air next the earth is heated by convection; in the same way an open fire warms the person, the walls, the floors, the furniture, by radiation, and these, together with the fire, warm the air by convection. Thus in a room with an open fire we are warmed by direct radiation from the fire itself, and it is important to note that under these conditions the feeling of warmth is produced with a much lower temperature of the air in the room than is necessary where radiant heat is not used. The principal objections to the open fire are the large consumption of fuel in proportion to the effect produced, and the difficulty of warming a room effectually and equally. Count Rumford estimated that in the ordinary fire-place fourteen-fifteenths of all the heat generated ascends the chimney and is lost. In this estimate sufficient allowance was not made for direct radiation, but it is probable that even in the best constructed modern fire-



Fire Place with Hot Air Flues.

place, from a third to one half of all the heat is thus wasted. The open fire-place is greatly improved in economy of heating power by so constructing it that it may supply a current of partially warmed fresh air to the room. This is done in various ways: as by setting up a soap-stone fire-place within the ordinary one, leaving a vacant space between them, into which fresh cold air is admitted from without, and after being warmed is thrown into the room through an opening or register above. This is an excellent plan for introducing the needed supply of fresh air without subjecting the occupants of the room to unpleasant draughts, but if a flue is made of some gas tight material, and carried through a chimney duly enlarged to receive it, the lower extremity communicating with the external air, (and not with your neighbor's parlor) and the upper with the room, the result will prove to be nearly as effective. (See cut.) In reference to the unequal heating at different distances from the fire, it is to be observed that heat is radiated in straight lines and as it gets farther from its source it is distributed over a much larger space and decreases rapidly in intensity of heating power; near the fire the heat may be intense, while the angles of the room may be but little affected. There is a semicircular line round the fire-place in which persons must sit in order to be comfortable, within which line they are too hot, and beyond which they are too cold. Of course the body receives the excess of heat only upon one side at once. More serious causes of objection to the open fire are the cold draughts produced by the air rushing in through the crevices of the doors and windows, and playing upon the backs of those who may be sitting around the fire; or forming a cold bath several inches in depth on the floor, in which their feet are constantly immersed. None of these circumstances, however, prevent the open fire from being the healthiest and best mode of warming a house where fuel is cheap or expense is not an obstacle.

In carrying up the flue of a chimney designed for open fires, all sharp angles are to be avoided; but it is on the other hand undesirable to have a perfectly straight tube, which allows the rain to fall directly upon the fire, and permits the wind to pass downwards without obstruction.

Franklin Stove.—This is a heating apparatus, invented by Dr. Franklin, which offers one of the best methods of managing an open fire. It is made of cast iron, is set up within the room, and the hot air and smoke from the fuel, instead of escaping from the fire directly up the chimney, are made to traverse a small and circuitous smoke-flue which gives out its heat like a stove-pipe. At the same time air from out of doors is introduced through air-passages which surround and intersect the smoke-flue, and, after being warmed, is discharged into the room through proper openings. This apparatus warms not only by radiation from the burning fuel like an open fire, but also by radiation from the hot iron; moreover, the air of the room is heated by contact with the metallic plates, and there is still another source of warmth in the heated air introduced as above described. The Franklin stove

is not a stove in the ordinary sense of the word, and was called by Franklin himself the *Pennsylvania fire-place.*

Grates.—The grate, being simply an open fire in which coal is burned instead of wood, has all the advantages and disadvantages that we have mentioned as pertaining to this method of warming. Coal, however, contains more combustible matter in the same space than wood, and produces a more intense heat, and consequently a much smaller fire-place answers for it, and a very narrow throat in the chimney serves to carry off the smoke. The coal-grate is a more economical apparatus for warming than the wood fire-place, chiefly because the current of air which enters the flue is much smaller. In the wood fire-place a copious stream of warm air passes up the chimney, which takes no part in combustion but carries off much heat, the place of the escaping warm air being supplied by cold air from without. For information as to the selection, construction, and management of grates, *see* GRATE.

Arnott's Smokeless Grate—is a new invention which claims to possess the following advantages: 1st. There is entire absence of smoke; 2nd. From the carbon being *all* united with the oxygen, a great saving of fuel is effected; 3rd. It will burn twelve hours by merely applying the poker; and 4th. It is never obscured, like the ordinary grate, by throwing on fresh coals. The bottom of the grate is a movable piston which may be made to fall a considerable distance below the lower bar. In using, a large charge of coals is introduced, which rests upon the piston and fills the grate. The coal is lighted at the top, so that the heat passes downward and consumes the smoke as it is formed below. As the coal wastes away at the top, the piston may be raised by the poker used as a bar, and thus fresh coal is supplied to the fire *from beneath.* When the first charge is consumed and the piston is raised to the bottom of the grate, a broad flat shovel is pushed in upon the piston to support the burning coals temporarily; the piston is then let down to the bottom of the box and a new charge of coal shot in. This arrangement is valuable for abating the smoke nuisance when bituminous coal is used; but it is difficult to make anthracite burn in it.

Open Stoves.—These are intended to radiate heat without any loss either by contact with the walls or by draught up the chimney. They consist of an iron chamber, having bars below and in front for admitting the air necessary for combustion; the smoke and gases are allowed to escape by means of a small flue issuing from the back and passing horizontally into the chimney. This flue is the only point of contact with any part but the floor, and as the heat does not descend to any appreciable extent, it is the sole conductor, and is, therefore, made so small as to prevent the escape of more heat than is of necessity carried off in the smoke. A stove is now constructed on this principle, in which the flue is made to ascend and then descend by the back of the stove, until it passes out either below the floor or a very little above it, and in the transit allows a still greater amount of the heat carried into the flue to escape into the apartment. This stove may be made if preferred with earthern or soap stone sides dividing it from the lateral chambers, and is excellently adapted for churches, public halls, large shops, etc. Even for ordinary sitting-rooms it is better adapted than any of the closed stoves. It presents a moderately cheerful fire, especially if wood be burned in it. It is exceedingly economical, and it may be made as ornamental as any other kind of warming apparatus.

Closed Stoves.—Closed stoves are intended to afford heat by warming the air in contact with them but without any direct radiation of heat from the fuel itself. In all of them wood, coal, or coke is used in an iron or earthern chamber with a closed door, and the results of their combustion are led into the chimney after being so obstructed in the flue as to allow time for most of the heat to be imparted to the surrounding air. Great numbers of these stoves have been invented, with all sorts of forms, all however being modifications of the same principle. Dr. Arnott attempted to improve upon it by inserting a chamber of fire-brick within the outer iron case, and carrying off the heated gases by means of a flue in the ordinary way. At the same time he attempted to modify the introduction of air by means of the expansion and contraction of a metal bar which opens and shuts an air-valve (thus rendering the stove self-regulating); but in practice his stove has not answered the expectations which were formed of it. It is much more difficult than the ordinary stove to light and keep in, and is constantly requiring attention.

The most important points to be arrived at in the construction and management of stoves are, *first*, ready contrivances for regulating the draught; *second*, accurate fittings in the joinings, doors, dampers, and valves, to prevent the leakage of foul gases into the room; *third*, enclosure of the fire-box with slow conductors, as fire-brick or soap-stone; *fourth*, a high temperature produced by the rapid and perfect combustion of fuel; and *fifth*, to bring all the heated products of the combustion in contact with the largest possible absorbing and radiating metallic surface, so that the iron in contact with the air may not be overheated, but give out its warmth at a low temperature. The cooler the surface of the stove, or the nearer it is to the temperature of the room, the more agreeable and salubrious will be its influence; *and, therefore, large stoves, moderately heated, are most desirable.* When the stove is very hot, the air of the room is parched and rendered unfit for breathing.

Elbow Joints in a stove-pipe make the same length of pipe much more efficacious in warming a room than it would be if straight. The cause of this is that the heated air, in making abrupt turns, strikes against the sides

of the pipe with sufficient force to break up its previous arrangement and so mingle it that the hotter air from the interior of the current is brought more into contact with the sides of the pipe, and thus more heat is thrown off. It also checks the rapidity of the current. As radiation is much slower at low temperatures than at high ones, the pipe, as it recedes from the stove, becomes rapidly less and less useful as a means of diffusing heat into the apartment. On this account little is gained by greatly lengthening the pipe.

Hot Air Apparatus.—Warming by hot air has lately come into very general use, especially in cities. In this case, the heater is not located in the rooms to be warmed; the hot air being conveyed to them through flues. The most common apparatus for this purpose is a hot air furnace, located in the cellar or basement, the air being introduced into a chamber that surmounts the heater and after being heated to the required temperature by contact with the hot iron escaping upwards through tin tubes which distribute it and entering the rooms through registers. This method of warming has undoubtedly commended itself to public attention mainly by its economy of space and by its superior cleanliness, the heating apparatus being excluded from the occupied apartments; the fuel is also consumed more completely and with greater economy in a single furnace than in several stoves or grates. It has the advantage of being capable of supplying a great variation of temperature. In mild weather the fire may be barely kept alight and the change in the temperature of the inflowing air may be very slight. In severe cold weather on the other hand the fire may be driven so that the iron can be heated to a very high temperature the influence on the air being correspondingly great.

A serious disadvantage lies in the fact that when the air is introduced into the room at a very high temperature, it streams at once to the ceiling, without imparting its heat to surrounding objects, and only descends when displaced by the fresh accessions of still hotter air. The result of this is that the air of the room is arranged in longitudinal layers the temperatures of which decrease from above downwards, so that the feet, which ought to be warmest, are in the coldest layer, while the head, which should be cool, is in an atmosphere several degrees warmer. Anything more unhealthy than this could scarcely be devised. It may be partially obviated by setting the register as low down as possible in the wall, and covering it with a hood which will shoot the hot air out horizontally. A register should never be set in the floor, as it not only collects dirt, but shoots the hot air directly towards the ceiling.

But the greatest objection to hot air furnaces and indeed all air-heating devices is, the excessive dryness of heat which they generate. Being used only in winter, they receive outside air at a low temperature holding little moisture; and, by heating it, greatly increase its demand for moisture. This it sucks up like a sponge from the walls and furniture of the house. If it be taken into the human lungs, it draws much of its required moisture from the body, often causing dryness of lips and throat, and affecting the lungs themselves most injuriously. Professor Brewer, of the Yale Scientific School, who has experimented extensively on this subject states that, while forty per cent of moisture is needed in air to make it healthful, the greater number of furnaces do not, by any contrivances, supply one half of this. He says that most furnace-heated air is dryer than is ever breathed in the hottest deserts of Sahara. How, then, may the furnace be used most beneficially and economically? The bad effect of the furnace—its dry irritating heat—is the result almost invariably of highly concentrated heat. The desire for economy has tended to the introduction of a comparatively small fire-box into the air-chamber, and consequently this fire-box must be kept at a very high temperature, if it is to be depended on to warm the house in severe weather. Now, as we have already explained, health and comfort are secured by heat of a low temperature given out from a large surface. It is better to heat air by fifty feet of surface at one hundred and twenty degrees than by twenty-five feet of surface at two hundred and forty degrees. This desirable end may be attained by greatly enlarging the fire-chamber, and still further by suspending in the air-chamber a quantity of sheet iron so as to divide the space between the heater and outer wall into a number of separate columns. These sheets of metal absorb the radiant heat and then part by convection with the heat thus obtained to the inflowing current of air. It will be observed that both sides of the metal sheets above described become air heaters. Double the surface of the fire drum may be advantageously used in this way and then four times the quantity of heating surface is added. Great advantages may be gained by suspending near the top of the fire chamber and directly over the fire a large mass of non-conducting material such as fire-brick, which becomes highly heated and radiates back on to the fire forming one of the best of gas consumers. This also retains its heat and gives it out gently after the coal is consumed. The heat from this mass also assists greatly in the rapid kindling of the fire when fresh coal is put on.

The advantage of any such improvement as that above described is that greater heating surface is secured at a lower temperature, and a pleasanter, healthier heat is produced; and a smaller quantity of fuel will be consumed in the production of the desired effect. To provide the needed moisture for the heated air it is desirable that the evaporation should be from a large surface at a low temperature rather than from a small surface at a high temperature. This may be obtained by placing a broad, shallow iron tank, such as is used in kitchen sinks, near the top of the hot air cham-

ber. From this no steam will rise, but there will go up a constant, almost imperceptible vapor, which will diffuse itself insensibly through the house, and render the air soft and pleasant. Gentle as the evaporation is from this broad surface, it will be found to consume, in a medium sized furnace, six gallons of water daily. By the use of these simple contrivances the most objectionable qualities of furnace-heat may be almost entirely removed. It follows too, other things being even, that the furnaces with the greatest radiating surface connected with the fire-box and making a passage for the smoke etc., are the best. The trouble is to get them without obstructing the draft.

Hot-Water Pipes.—These are now extensively employed in heating public buildings and the halls, corridors, etc., of large houses; but they are scarcely suited to smaller establishments, partly on account of the prime cost, which is considerable, and partly from the trouble and expense attending their use. The principle on which they act is the tendency hot water has to rise and displace that which is of a lower temperature. Carrying out this well known law, the designer of any hot water apparatus constructs a boiler of the proper shape and size, and connects with it two pipes varying from 1½ inches to 4 inches in diameter, taking care that one (the flow-pipe) is attached to the highest point of the boiler and the other (the return-pipe) to the lowest. These pipes are then carried wherever heat is desired, or to air-heating chambers in the cellar, always keeping the flow above the return-pipe, and connecting them together at the extreme end of their course. Here an air-pipe should be introduced, which need not be more than half an inch in diameter, and which is simply to allow air bubbles to pass out so that water may always completely fill the pipe. The boiler is supplied by connecting a cistern or reservoir somewhat above the level of the highest pipe with any part of the return-pipe by means of a half inch pipe. This connection should be made at a distance from the boiler, or there will be a waste of heat, which in a badly-constructed apparatus is very considerable.

It is necessary that, as far as possible, the pipes should be isolated from the walls, to prevent loss of heat by conduction; but there must, of course, be supports and attachments for them to some slight extent, and these should be non-conductors.

More detailed hints regarding various kinds of furnaces and hot-water apparatus can better be obtained from those who put them up. The general principles laid down in this article will enable the reader to judge the facts presented by dealers.

Gas Stoves.—These have lately been introduced as a means of warming, and great claims are made for them on the score of economy. A great variety of forms are offered, but all of them are essentially the same in principle, the gas being simply burnt in an iron chamber, and the results being either suffered to escape into the room, or else carried off in the ordinary way by a flue. To the former mode there are great objections, inasmuch as the products of combustion are injurious if respired. They may be carried off by a small tube arranged for the purpose, if care is taken to protect it in passing near combustible material from danger by fire. Under ordinary conditions, however, the gas stove, as a means of heating a room, is both dangerous and unhealthy; and its economy is doubtful, as gas costs at least ten times as much as coal to produce the same amount of heat, and the positions are therefore rare in which the additional convenience in the use of gas will overcome this great difference in cost. (See AIR and VENTILATION.)

Heat Governor.—(The editor inserts this article on his own responsibility. He has tried the invention on two furnaces—a large one and a small portable one—in his own house, with entire satisfaction as regards the large one, and only such difficulties with the small one, on which the governor has just been placed, as he thinks experience will surmount. He has brought it to Mr. Leeds' attention, but not long enough before the book goes to press to enable Mr. Leeds to endorse it from a personal trial.) Probably everybody using a furnace in our variable climate has been more than once tempted to turn it out of doors on account of its keeping the house too hot in warm weather and not warm enough in cool weather. This trouble is especially great when a change of weather occurs at night, when it is impracticable to regulate the fire.

To obviate these difficulties, many self-regulating apparatuses have been devised. The editor knows of four. One of them closes the smoke-pipe when it gets hot, thus driving back smoke and gas into the house, and, perhaps, lessening the heat at the very time it is needed on a cold day. Another opens a hole on the side of the smoke-pipe, being a sort of automatic "Boston damper;" this it may do at the very time great heat is needed. The third is open to the same objection, as it closes the draft at the ash-pan whenever the hot-air chamber is very warm. The fourth is *Tingley's Automatic Heat Governor*, which has the merits of all the others without any of their faults. We append a description. (See Figures on next two pages.)

The cylinder A, in the hot-air chamber over the fire-pot, and the cylinder B, in the cold-air flue, communicate by an air-pipe, D, with an air-chamber M, the bottom of which is an india-rubber diaphragm (C). Now these two cylinders A and B, the pipes D, and the portion of the chamber over the diaphragm C are virtually one close reservoir filled with air. When this air expands, its only way of getting room is by pushing down the diaphragm C. When it contracts, the outer air will push up the diaphragm; *i* is a rod connecting this diaphragm with the lever I. J is a rod connecting the lever with the damper F, which opens and

shuts the draft-pipe H, through which passes all the draft that causes the fire to burn, entering the ash-pit back of the draft door. Now when fire is kindled in the furnace, and heat raised to excess in the hot-air chamber, it will expand the air in cylinder A, forcing it through pipe D, enlarging the bulk of air in chamber M, depressing the diaphragm C, and causing the rod *i* to tip the lever I, throwing up the end N, causing the rod J to close the draft damper F.

The cold-air cylinder B operates to cool the air passing through D, so that on a cool day the heat in the cylinder A will not close the damper as readily as on a warm day, and *vice versa*.

So much for regulation of the supply of air to the fire. In addition to this there is the equivalent of the so-called "Boston damper" in the smoke-pipe. The "Boston damper" is an old-fashioned arrangement regulated by hand for opening a hole in the smoke-pipe, thus causing it to draw through the outer air instead of through the fire-pot, and so lessening combustion—a vast improvement on the old plan of lessening combustion by shutting off the smoke-pipe with a choke damper and so retaining smoke and gases. Now, Tingley's governor has an additional pipe, W, going right into the smoke-pipe. When the damper F is closed, so as to lessen combustion, the damper R in this additional pipe is opened, which is an additional agency in lessening combustion, and when F is opened R is shut.

K is a weight sliding on the lever N, making it harder to close the drafts if it is slid toward N, and easier if slid in the opposite direction.

The proprietors claim for this invention that:

1. *The smoke-pipe is left open*, unobstructed by dampers, giving free passage at all times to all smoke and poisonous gases.

2. *The atmosphere is itself the agent to open and close the draft valve to the fire*, Thus when the fire becomes low the air-vessel (A) in the hot-air chamber, cools and causes the draft-valve (F) to open, and the fire then kindles, and the heat increases in the hot-air chamber, causing the valve to close as before. So, too, the temperature of the atmosphere outside of the building acts upon the air-vessel (B) in the cold-air box, making the draft-valve less sensitive to the heat in cold weather, and more sensitive in warm weather.

3. *The amount of heat produced will be in exact proportion to the demand for hot air in the rooms above.* Thus, if the registers are partially closed, the hot air is kept back in the hot-air chamber, it acts upon the hot-air vessel (A), causing the draft-valve (F) to close, thus checking the fire and reducing the amount of heat obtained. The fire in the furnace is regulated without going into the cellar. An even temperature is always obtained in the rooms warmed, irrespective of the state of the external atmosphere, and it is impossible to get an intense heat in the hot-air chamber when the registers are all closed.

4. *The consumption of fuel will always be governed by the amount of heat required.* If the weather is warm, the self-acting "governor" closes the draft, checks the combustion,

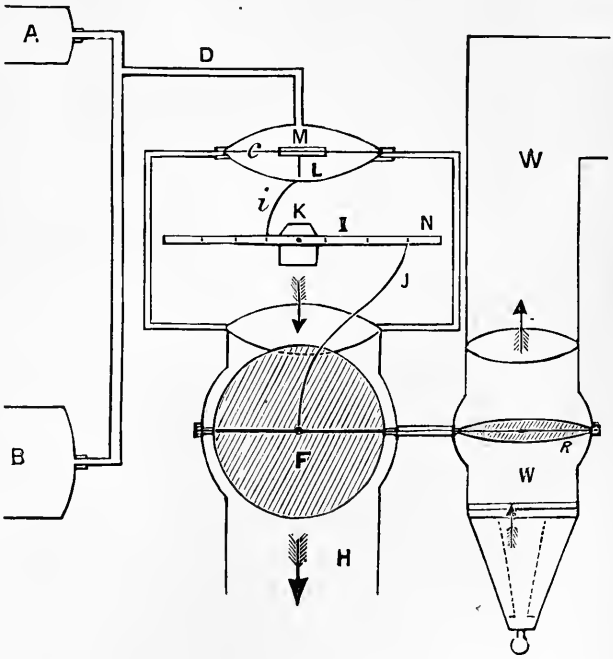


Fig. 1.—Sectional View of Governor.

and saves the fuel. Without the "governor" it is very difficult and practically impossible to regulate the draft so as to prevent a great waste of fuel, and an overheating of the house when the weather is mild.

5. Though the "governor" is self-acting and regulated by the temperature of the atmosphere, *the draft valve can be closed or opened by the weight* (K). By moving the weight to the right or left, as the case may be, more or less heat will be obtained.

6. By the use of the self-acting "governor" *there will always be a strong atmospheric pressure inwards into the fire-pot.* Thus, the smoke-pipe being always open, the escape of smoke and gases into the hot-air chamber is impossible, however loose the joints of the fire-pot may be, and however defective may be

the castings. The combustion is regulated upon the air-tight principle, the lower door of the furnace being air-tight, and just air enough being admitted through the draft-pipe (H) for the purposes of combustion, while perforations in the upper door admit sufficient oxygen to consume the gases and carry them off through the smoke-pipe.

7. The amount of heat being always regulated by the atmosphere or by the weight (K), *the heat can never exceed the point fixed upon*, no superfluous heat can be generated, no fuel can be wasted, *and no danger of fire from an overheated furnace is possible.*

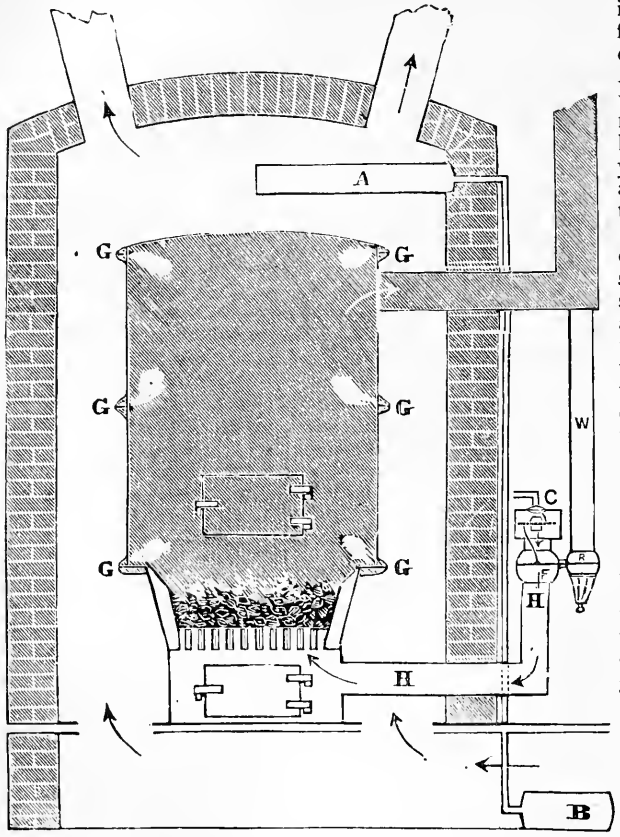


Fig. 2.—Section of Furnace, with Governor attached, showing the atmospheric pressure inwards to the Fire-pot when the Heat Governor is applied.

A....Hot-Air Vessel.
B....Cold-Air vessel.
C....Diaphragm.
F ...Draft Valve.
G .. Joints of the Fire-box.
H....Draft Pipe.

These claims all appear reasonable. The editor's experience does not contradict any of them; though it is possible that longer experience may.

WARMING-PAN.—The common warming-pan for beds is filled with live coals, and independently of the danger of scorching the sheets, or even setting fire to the bed, it requires care not to leave some smoke and suffocating fumes. A superior warming-pan is filled with boiling water, which is equally effective and perfectly safe from all these accidents. Better than either is the HOT-WATER BAG, which *See*.

WARTS.—The most common warts are those on the hands and fingers, or sometimes on the face, and more rarely on other parts of the body; they chiefly affect young persons. A somewhat scarce variety occurs upon the scalp occasionally, and almost invariably in women after adult age, though it has been met with in males; from its location and form, it gives great pain and inconvenience in brushing the hair. A third variety is occasionally met with beneath or at the side of the finger or toe-nails; these originate beneath the skin and protrude beyond the free margin of the nail, and are generally very painful and troublesome.

Treatment.—The best method of destroying the common warts, such as occur on the hands and scalp, is to apply the glacial acetic acid, which may be either dropped upon them or painted thickly over them with a brush, care being taken to apply a little oil or glycerine to the skin surrounding the wart so as to avoid blistering it. Lunar caustic, tincture of the perchloride of iron, a drop of pure nitric acid, or the acid nitrate of mercury, are all good and frequently efficient remedies. The scalp warts may generally be removed by tying a piece of silk or thin silver wire tightly around their bases, and allowing them to drop off. In the case of rapidly-growing warts, and of those which are evidently degenerating in their appearance, excision of the wart and of the integument from which it grows is the best treatment.

WASHING. — A wash-board and wringer are indispensable. A "pounding-barrel" is necessary only where the clothes are very badly soiled. It is a strong cask, three feet high, with a diameter of about twenty-six inches at the bottom and eighteen inches at the top. With this should go the "pounder" or mallet of hard wood, ten inches long and six and a half inches in diameter, with a stout ash or hickory handle. Assort the clothes the night before washing, taking out the colored clothes and flannels, neither of which are to be boiled; put the collars by themselves, also the handkerchiefs and the stockings, napkins, and tablecloths. Put all the cotton and linen cloths in warm suds and leave them to soak over night. In the morning begin the washing in a tub one-third

full of hot suds; as the water requires changing, pour it off and add clean hot suds. Wash the finest articles first, rubbing the most delicate with the hands only; as they are washed, wrung and shaken out, put them in an old pillow case to be boiled. Rub the other clothes on the board, paying special attention to the hems and seams, and if, after wringing, there are still any streaks, rub a little soap on them. Pour a pailful or two of clear cold suds in the boiler (of soft soap, a large spoonful is enough for a small boiler), lay in the clothes and cover them with cold water; keep them pressed down with a stick; they must not be crowded nor must the boiler be so full as to boil over. Instead of boiling, some prefer soaping the clothes after washing, then pouring boiling water over them and allowing them to stand until cool. When they have boiled from two to ten minutes (as they are more or less soiled) slightly wring them, or take them out to drain into a coarse basket placed on sticks across a tub; then rinse them in clean, cold water, looking carefully for streaks, none of which should be allowed to remain; then wring the clothes, open and throw them into another clean, cold water in which the "blue-bag" has been squeezed two or three times, and the blueing equally diffused; rinse at once, wring very dry, shake out, and hang them in the open air. Should the weather be rainy, leave them in the rinsing water, *without the blueing*, until a fair day. Do not put them out in severe frost *and* wind. A *still* frosty night whitens, and does not injure them.

Blankets. (*See* WOOLLEN GOODS, below.)

Blueing.—The "ultramarine wash-blue" which comes in little balls, is greatly prized. Use it in a bag of strong cotton five inches deep and three wide. Tie a string very tight around the neck of the bag. Always use ball blue for fine goods. Bottle blue is just as good, though, for sheets, ordinary underclothes, etc.

Chemicals of any strength, used to remove stains, have *some* effect in weakening the texture.

Counterpane. (*See* COUNTERPANE.)

Doubtful Colors.—Dissolve a pint of salt in two quarts of boiling water, put the dress in it while hot and let it lie several hours, then wring it dry and wash as usual in clean warm suds, of *hard* soap; rinse in two clean waters, wring dry, starch and hang in the shade, so arranged that it will dry quickly. In case of rain, leave it in second rinsing water with half a pint of salt to a gallon. It should not be sprinkled until the day it is ironed.

Flannel. (*See Woollen Goods* below, and article on FLANNEL.)

Ironing.—For shirts, use a board eight inches wide and eighteen long. It should have enough thicknesses of flannel on one side neatly tacked on the edge, to give it a soft surface, and over both sides a thickness of cotton sewed on firm and smooth. After ironing the *entire* shirt, pass a cloth wrung from clean cold water over the bosom, and use the "polishing iron," expending as much force as possible to produce a beautiful surface. In ironing sheets, pillow-cases, towels, tablecloths and napkins, fold them twice lengthwise, then twice across. Iron everything until perfectly dry, to give it a gloss, and to prevent its becoming rough while airing.

For pressing small articles not sent to the wash, there is a small gas iron, which can be used as well over a lamp-burner, useful for summer or boarding houses. The flame burns inside.

Lace.—Fine lace should not be ironed, but when damp, pressed by the hand and shaped by the nails into the smoothness required, over the knee on a towel. Coffee is used to give laces the prized creamy tint. (*See* LACE.)

Quilt. (*See* article on COUNTERPANE.)

Soap. (*See* SOAP.) A cold water soap has of late years been found very useful for ladies' use, when hot water is not handy. Ribbons, laces, ruffles and any slightly soiled article can be washed with it.

Starching.—Mix three tablespoonfuls of dry starch to a cream with cold water, and stir it fast into a quart of boiling water; boil five minutes; when the hand can be borne in it, dip the collars, shirt bosoms and cuffs, rubbing the starch thoroughly in; fold the collars, if separate, in a clean towel; fold a shirt lengthwise, bringing the two sides of the bosom together, with the wristbands placed between; this keeps the starch from the rest of the shirt; then roll it very tight; sprinkling a little water on the flaps. Petticoats require much thinner starch. Sprinkle and fold all the linen and cotton clothes at night, to be ironed the next day; pack them closely in the basket, cover with a damp cloth next them and a dry one outside. Clothes sprinkled with *hot* water may be ironed in from one to two hours after the sprinkling. (*See* STARCH.)

Woollen Goods.—For blankets, make suds of very hot water and brown laundry soap. First put blankets in and stir with a pole until the water is cool enough to put the hands in. Wash thoroughly with the hands. Then rinse in hot water, wring well, shake thoroughly, and hang to dry in a sunshiny, warm, open air or a laundry. When not quite dry, iron. Heavy fine blankets, it is really cheaper to send to a professional cleaner, especially as, with careful use, blankets need not be cleaned more than once in two years. Never rub soap on woollen goods of any sort. Sudden chills shrink and harden the materials. A little blueing may be added. Shawls, knit and worsted materials, may be washed in the same way. Do not stretch too much by wringing or pulling.

(*See* CLEANING, SOAP, STAINS, STARCH.)

WATCH, (Care of).—Wind your watch as nearly as possible at the same hour every day. Be careful that the key is in good condition, as there is much danger of injuring the machinery when the key is worn or cracked; there are more main-springs and chains broken through a jerk in winding than from any other cause. As all metals contract by cold and expand by heat, it is desirable to keep the watch as nearly as possible at one temperature.

Never lay it on marble. Keep the watch as nearly as possible in one position—that is if it hangs by day, let it hang by night, against something soft. The hands of a chronometer or duplex watch should never be set backwards—in other watches this is of no consequence. The glass should never be opened in watches that set and regulate at the back. You cannot move the regulator too slightly or too gently. Be careful to keep the watch-pocket free from dust.

WATER.—The innumerable uses to which water is put in the household, and the profound influence which it has upon health and comfort, render it of such importance that, as we have said in the article on HOUSES, the condition of the water supply and the character of the water itself should be the first thing to engage the attention in selecting or locating a home. Water is the most important of all foods, whether liquid or solid, and is taken into the body to the amount of several pints daily. It constitutes almost 87 per cent. of the entire bulk of the body. The quality of the water of which so large a quantity is required is a matter of the first importance to every household.

Absolutely pure water consists only of oxygen and hydrogen, but such an article does not exist in nature. The nearest approach to pure water is the distilled water produced by chemists, but even this is not absolutely pure, and it begins to absorb gases the moment it is exposed to the air. The best natural waters contain salts of lime, ammonia, magnesia, carbonic acid, and other substances; and many contain in solution organic and inorganic matter enough to render their use highly objectionable. Water containing organic matter dissolved from animal and vegetable substances, or poisonous gases absorbed from the air, is a very dangerous drink, and should be avoided. Water contaminated with miasma causes fever and ague, and it is probable that this disease is caused more frequently by drinking such water than by breathing the air of malarious districts. Water contaminated by effluvia from cesspools, privies, and barnyards is a fruitful source of typhoid fever. Many of the pleasanter drinking waters are very dangerous from the contamination of cesspool matter. The organic impurities are often resolved and converted into pleasant tasting saline matters, the disease germs being still active.

Melted ice and snow are perhaps the purest forms of water that can be obtained naturally; *rain-water* is never really pure, as it contains gases which it absorbs in passing through the air. The water of our lakes contains various inorganic and organic impurities from the rivers which flow into them or the springs which supply them. *Spring* or *well* water, although it may look transparent, always contains saline matters, and chiefly the lime salts; hence such water, although very agreeable to drink and quite wholesome, is known as *hard water*, and soap curdles in it and does not produce good lather. Pure water is very insipid to the taste, and it is to the gases and saline impurities of ordinary spring water that its refreshing properties are mostly due. The danger from impure water arises, as we have already said, from the decaying organic matters and those derived from cesspools, etc., with which it may be contaminated. *River* water contains less saline matter than spring water, but it is more likely to contain organic impurities. Near large towns it may contain a good deal of sewage, or refuse from manufactories; it contains also fishspawn, leaves, and silt or mud, according to the rapidity of the current. Before, therefore, it can be used for drinking purposes, it must be filtered through beds of sand, gravel, etc., so as to remove impurities. Any running stream has a self-purifying power, because it continually exposes fresh portions of the water to the air, and so the organic matters get oxidized; on this account it is very important that in streams supplying large towns there should be a rapid current, absence of sewage from the towns above, and proper filtration. River and rain water are commonly known as *soft waters*, because they contain little or no lime; hence they are more useful for washing and other domestic purposes.

In selecting water, when selection is possible, it is desirable that it should be clear and bright, without smell or disagreeable taste, cool and soft, and of smooth and soft flavor, but the latter quality will necessarily vary with the soil or rock from which the water is obtained. As a rule, there is an unpleasant smell and not unfrequently an unpleasant taste from water contaminated with animal matter, either when first drawn from the well or after having been set aside for a time, and such water should never be drunk. It is, moreover, not infrequently turbid, or leaves a deposit more or less slight after having been left at rest; but sometimes water sufficiently impure to produce disease may have none of these characteristics. Turbid water, if from a brook, may be harmless, since the turbidity may be due only to the soil or sand with which it is mixed, and which may entirely subside; but all turbid water should be regarded with suspicion, either in reference to healthfulness or hardness. Turbid water from wells almost always implies contamination. Unfiltered water may also contain animalcules or the lower forms of vegetable life, and particularly if it have been derived from a watershed or allowed to remain without much motion in uncovered tanks. Such additions are extremely rare in deep well-water, and very frequent in pools. It is desirable of course that all such impurities should be extracted by filtration or rendered harmless by boiling; and it may be laid down as a general rule that while no kind of water is injured by filtration, nearly all may possess substances which might advantageously be removed by that process. Wherever there is reasonable ground to believe that the water is impure from animal matter, and where the water has a disagreeable smell or taste, it is desirable

that it should be boiled, and if possible filtered, before being used as drinking water.

Cooling Water without Ice.—Put it into an earthen jar or pitcher, which surround with two or three folds of cotton or linen cloth, to be kept constantly wet. The evaporation from the cloth, especially if the jar be placed in a draught of air, will carry off the heat from the inside, and reduce the water to a very low temperature.

Distilled Water.—In many cases of sickness, distilled water is an important aid to recovery. It can only be made by the use of apparatus which is very troublesome and inconvenient. Druggists usually keep it for preparing medicines. Water which is almost as good for all ordinary purposes can be easily prepared by boiling common water briskly for a few minutes, and when it is cool, straining it through a pan of charcoal, and keeping it in a well-corked bottle in a cool, dark place.

Filters.—There are two objects to be attained in filtering water, viz., to remove any gases upon which a disagreeable smell may depend, and to arrest any particles of matter that may be suspended in the water; in other words, to deodorize and clarify the water. Filters of sand were formerly in common use, and such may aerate or clarify water and remove all organisms. Sand is not, however, a deodorizer, since it does not absorb gases, and therefore charcoal is greatly to be preferred. Charcoal, indeed, is the most valuable of all agents for the purpose of filtering. The foulest ditch water made to pass through it comes out sweet, clear, and bright. Animal charcoal, derived from burnt bones, is to be preferred to wood charcoal, since it will absorb a very much larger volume of gas and destroy animal matter.

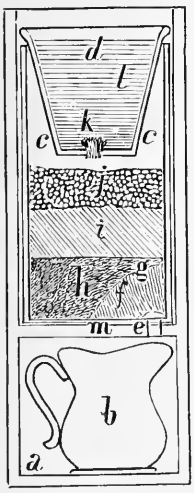


Fig. 1.
Home-made Filter.

There are many forms of filters, nearly any of which are good, and some of which should find a place in every household. They naturally divide into those used where water runs from faucets in the house, and where it does not.

Of the later and simpler class, one which can be made in every household, and which has been repeatedly used by the writer, is represented in Fig. 1. Procure a wooden box (*a*) three feet high and a foot square, open on one side, with a shelf (*m*); on this shelf place a common stone jar (*c*), and let a flower-pot (*d*) rest in the mouth of the jar. If you cannot get a jar or tank with a faucet fitted, in a hole neatly made in the bottom of the jar, insert the cork (*e*) from beneath, and place a sponge (*k*) in the hole at the bottom of the flower-pot. Put a large sponge (*f*) over the opening in the jar, and a piece of thin muslin (*g*) over this sponge; then put into the jar, first a layer of three or four quarts of clean white, or river sand (*h*), then the same quantity of pulverized charcoal (*i*), and above that a quart of small pebble stones (*j*). The pitcher (*b*) stands below the shelf (*m*). In order to have pure water, the filter should be kept constantly at work. During the greater part of the year it should be placed near the hydrant, or pump, so that the waste water may flow off.

The flower-pot (*d*) whose sponge prevents coarse materials passing into the jar, should be cleaned once or twice a week; but the jar requires no attention whatever, more than once or twice a year. Care must be taken to have the hole into which the cork (*e*) is fitted, close to the bottom of the jar, so that when the filter is not at work, no water will remain to become impure.

The whole cost of this filter need not exceed two dollars.

Another is shown in Fig. 2. The water is forced through the charcoal from beneath, and

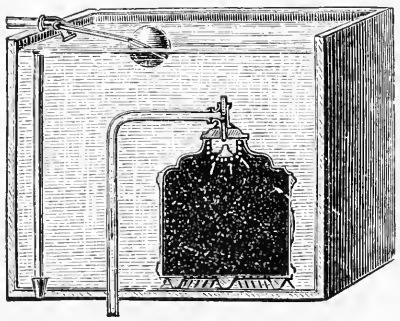


Fig. 2. Tank Filter.

the filtration is thus rendered more complete.

In both the foregoing, the charcoal should be frequently renewed.

A very simple filter has recently been devised for use on faucets (Fig. 3). It contains a little cup (*a*) filled with coarse charcoal and sand, and provided with a network of wire gauze—this is reversible. Above that is placed a common sponge pressed firmly into its place so that it entirely fills the space. This is encased in a little perforated cap (*b*), and is placed over the charcoal vessel. The water which passes through this is, therefore, obliged to pass through the sponge, and then through the charcoal. Although it acts as a perfect filter, it does not seriously interrupt the flow. The

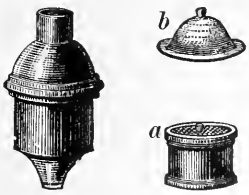


Fig. 3. The Triple Filter.

advantage of this filter is, that when it becomes clogged and the flow of the water is impeded by the impurities separated, it is merely necessary to open it and take out the sponge, wash it and return it to its place, and reverse (*a*) when the first pint of water passing through cleanses it.

Fig. 4. Hose and Basin Cock Filters.

Fig. 4, is a house filter without the sand and charcoal cups, containing the sponge only.

Porous stone is sometimes used for filtering; the difficulty with it often is that it soon clogs, and cannot easily be cleaned.

Filters are constructed on the same principle for use in manufacturing establishments. Figure 5 represents one suitable for a large factory or hotel.

As there are really two filters, either one may be cleansed without interfering with the flow of water through the other, as indicated by the arrangement of the cocks.

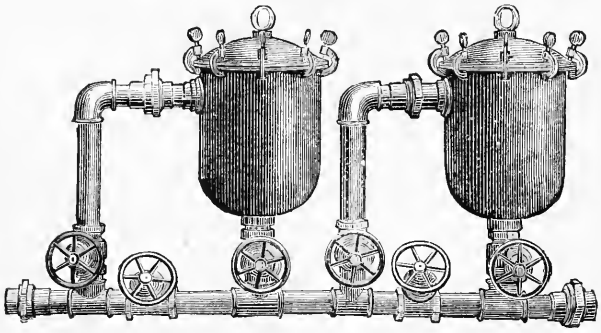


Fig. 5. Constant Stream Filter.

Tests for Impurities.—The presence of organic matter in water may generally be detected by putting two or three drops of Condy's fluid, or permanganate of potash, into half a gallon of the water; if pure, there will be a pink tinge; if impure, it will soon become colorless, or a faintly brown precipitate is produced. A still more simple test is given in the *Journal* of the Franklin Institute. A half-pint of the water should be placed in a perfectly clean colorless glass bottle; a few grains of the best white sugar should be added to it, and the bottle exposed to daylight in the window of a warm room. If the water becomes turbid, sewage contamination may be suspected.

For the discovery of *Sulphate* or *Carbonate of Lime* or *Magnesia*, add a few drops of a solution of nitrate of barytes, when the fluid will become turbid, which turbidity again will be removed by the addition of a drop or two of pure nitric acid.

For the *Chlorides*, add a solution of nitrate of silver to the previously tested solution, which gives a precipitate.

The *Sulphates* or *Carbonates* are also indicated by the turbid appearance on the addition of a solution of acetate of lead.

Sulphate of Lime is also detected by what is called the *soap test*, which is applied by means of a solution of soap in alcohol; when the sulphate exists in an undue degree, causing the water to be hard, it throws down a curdy precipitate, which is in proportion to the quantity of lime.

Magnesia is indicated when a milkiness is the consequence of adding a solution of phosphate of soda to water which has previously been treated with carbonate of ammonia.

Free Carbonic Acid is detected by a milkiness being produced by the addition of an equal proportion of lime-water, or by adding a small quantity of the acetate of lead.

The tests for the more rare salts, &c., are too delicate for ordinary use, and they are of little interest to the householder for ordinary domestic purposes.

The hardness of water is caused by the presence of lime, or magnesia salts. When hardness is due to the presence of carbonates of those substances held in solution by carbonic acid, it is "temporary," and simply boiling the water for a short time will remove it. The lime and magnesia carbonates settling to the bottom of the vessel in flocks. It is "permanent" when sulphate of lime is present, which is not removed by boiling in this manner. The use of hard water for washing purposes is to be avoided, if possible, as lime or magnesia forms insoluble compounds with soap, thereby rendering much of it useless.

WATER-BACK.—An iron chamber at the back of the range through which the cold water enters by one pipe, and out of which it passes by another into the boiler. Coal and ashes sometime accumulate between it and the grate, and prevent it from becoming properly heated. If hot water cannot be readily had, this should be looked to. If the fire becomes extinguished early on a very cold night, and the draft is left open, the current of cold air which passes up the chimney will strike directly upon the "water back" and perhaps freeze the water which

stands in it. Of course this might be avoided, if the faucet through which the water from the boiler passes were turned so as to permit a trickling stream to flow out, as that would be sufficient to keep the water moving the entire length of pipe.

The water-backs in houses where the ranges have had no fires lighted, and where the water has been allowed to collect, will cause a great deal of trouble to owners by flooding the premises if they are not cared for. A good rule to adopt in all houses is for the servant to test the faucet through which the hot water passes, the first thing in the morning, if the fire is suffered to go out over night. If it is found that it will not flow, while it will come through the cold water pipe, there is good reason for believing that the frost has sealed it up. No fire should be made, but the plumber sent for, who will disconnect the water pipes and remove the water-back, after which there may be fires until the water-back is replaced, but no hot water. The ice is then thawed out by steam, the water-back tested in order to discover whether any flaws have been made by the action of the frost, after which it is replaced or a new one substituted. All troubles of this kind may be entirely escaped if a low fire is maintained all night. It is unusual for a water-back to freeze up in one night, even if the fire is dropped early in the evening, the brick-work retaining some warmth for twenty-four hours, except during excessively cold weather. If the water is kept running through the boiler all the hot water will be wasted, but the sacrifice of a little convenience in this regard will save many hours of delay and the litter and expense of the plumber's work.

Plumbers say that there is very little complaint of bursting boilers, and that most of the so-called explosions are really the results only of burst water-backs. By carelessness, after a water-back has frozen, much inconvenience may be caused in a kitchen. If a fire is made in a range which has a frozen water-back, the almost inevitable result will be an explosion, for the heat converts the water in the water-back into steam, which is held in the chamber by the ice which stops the pipes. There is a loud report, followed by a rush of steam, a sudden quenching of the fire, and then a flood of water. If the faucet connecting with the boiler is tested before the fire is made, and there is found to be no pressure, fire should not be lighted until the plumber has blown out the pipe. It may be that the back will burst, as it frequently is known to do, while the freezing is going on. The water-backs will stand great pressure, but in a majority of cases where they are exposed to the frost the sudden contraction of the cast-iron chamber and the simultaneous expansion of the contents of the water-back result in a split.

WATER BATH. (*See* BAIN-MARIE.)

WATER-CLOSETS.—Though unquestionably a great convenience, water-closets, as now usually placed in houses, are an invention of which no one has any special reason to be proud. With a show of cleanliness they combine essential nastiness and a good deal of real danger. In cities, perhaps, their use cannot at present be dispensed with; in the country, with imperfect drainage and water-supply, they are simply a nuisance. Earth should always be used instead of water in country-places; it is preferable in every way. (*See* EARTH-CLOSET). To keep water-closets reasonably safe, the first thing is ventilation of the sewers and especially of the soil-pipe in the house; if not they ventilate themselves into the house by means of the water-closets. Disinfectants may be used (such as carbolic acid, either in powder or solution) but are not of so much value as is the free ventilation of drains and soil-pipes. This is the only condition of safety.

Fixed wash-basins in bed rooms, however, kill ten to the water-closet's one. The water trap is a very indifferent barrier to sewer-gas, and the overflow of the basin is a perfect gateway for contagion—especially in bed-rooms having no fire-place and with closed windows. (*See* DRAINAGE.)

WATER-CRESS. This is the most common and the best of the family of cresses. It has a warm pleasant taste, which renders it a favorite salad; and the neatness of its form makes it useful for decorating meats and other dishes. It grows on the banks of running streams, preferring clean water to muddy. It should be carefully distinguished from the water-parsnip which is poisonous, and which is frequently found growing with it. Water cress is found in abundance in the markets from March until May, and again from September until November. (*See* SALADS.)

WATER-CURE. (*See* HYDROPATHY.)

WATER-MELON.—This favorite summer fruit is cultivated throughout the country, though it arrives at a perfection in the Southern States which is perhaps hardly equalled further north. Among the best varieties are the *Spanish*, *mountain sweet*, *orange*, *Carolina*, *citron*, etc. The Spanish variety is one of the choicest, being very sweet and rich, and of good size. The skin is dark green in color, the rind is moderately thick, and the flesh red, and solid. The orange water-melon is smaller, of a round shape, and very sweet; in eating, the rind should be cut through and taken off without breaking the inner pulp. The Carolina water-melon is a good variety, much cultivated at the South, and is the first to make its appearence in the market; it ripens in July and is shipped north in large numbers. The citron water-melon ripens later, and is quite small and round, with a very thick skin or rind; it is generally used for preserves. The common test in selecting water-melons is to press them between the hands and knees; when ripe they make a sort of cracking noise. A simpler test is to thump them, or rap them with the knuckles; they will then, if ripe, give back a sort of muffled hollow sound. It requires practice, however, to judge them properly. One rule

should always be observed in regard to water-melons, and that is never to eat one which has been plucked for more than four or five days. Water-melons are in season from about the middle of July to the middle of September.

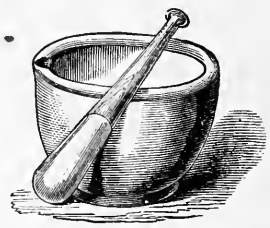
WATER-PROOF.—The cloth commonly called "water-proof" and sold in the stores as such is not really water-proof though it will keep out the dampness for a much longer time than ordinary cloth. The only fabric yet produced which is wholly impervious to water is *Macintosh*, a cloth covered with India-rubber in solution. A very good quality of this may be made as follows: Dissolve one pint by weight of India-rubber, and one of paraffin or stearin, in two of benzole; dilute as much as necessary, and either saturate the fabric with it or lay it on with a brush. A good water-proof for common use can be made of unbleached muslin; hang it up in a dry place, and, with a brush, give it two coats of boiled linseed oil. The oil may be bought ready boiled. Canvas may be prepared in the same way. *Or*, get some weak size, such as is used by paper-makers; heat it, and stir in a small lump of alum and a small quantity of soap-lather. Then with a brush apply it to the cloth as directed above for the oil. Water-proof clothing is not healthy, because it excludes air from the body and confines the perspiration which is constantly thrown off from the skin and which is essential to health. When worn at all, it should only be in cases of necessity, and should be taken off as soon as the need for it is past.

WAX.—This useful substance is obtained from the comb of the honey-bee, and in its original state is known as bees-wax, which has a considerably quantity of honey still united with it, and is of a dirty yellowish color. Before wax is employed for the ordinary purposes, it is purified and bleached, by first soaking it in cold water, and then boiling it in hot water, after which the wax is allowed to collect at the top by cooling, when it is still to be bleached. The bleaching process consists in cutting the wax into very thin ribands and exposing it to the action of light and air. Chlorine bleaches wax very readily, but it renders it extremely brittle, and unfit for use in candles. When thoroughly bleached, the wax is cut into the thin round cakes in which form *white wax* is sold. White wax is sometimes adulterated with white-lead to increase its weight; this may be detected by melting the wax in water, when the lead will fall to the bottom of the vessel. Adulteration by mixing tallow or suet with it may be detected by its greasiness, and by its wanting that transparency which pure white wax possesses; also by its disagreeable odor when melted. Spermaceti is also employed for the adulteration of wax; this mixture is less transparent than pure wax, and it melts more easily; the surface of the cake has also a mottled appearence. Wax is also adulterated with resin, which renders it brittle; the presence of resin may be suspected when the fracture appears smooth and shining instead of granular, and it may be detected by putting small pieces into cold alcohol, which will dissolve the resin and leave the wax untouched. In buying wax, break each cake, for the centre is often impure, the outside only being good. Paraffine is the most common adulterant, and is difficult to detect, except by chemists. Wax is an ingredient of many plasters, ointments, and cerates. (*See* CANDLES.)

WEAK-FISH.—This is an excellent fish when fresh, but it is not firm-fleshed, and after being kept a few days its flesh becomes soft and spongy and loses its flavor. In color, the weak-fish is of a bluish gray, with speckled back and sides, belly white, fins yellow, and the under jaw quite red. It is in season from May to October, but is best in September and October, when it is also very abundant. It weighs from half a pound to eight pounds, but the average weight is about one pound. Boiling is the best way of cooking it. Prepare, cook and serve as directed for BASS.

WEBBING.—A strong hempen fabric, from one to three inches wide, used for holding up the seats of stuffed chairs, sofas, etc.

WEDGWOOD MORTAR.—Many of the receipts in this book require for their proper preparation the use of a pestle and mortar. Those made for druggists of marble or ironstone



Pestle and Mortar.

are expensive, but an excellent article which will answer all household purposes is made of the wedgwood earthenware, and may be procured at any house-furnishing store. In selecting see that both mortar and pestle are perfectly smooth and free from all bubbles and other imperfections.

WEIGELA.—The Weigelas, though introduced within a comparatively recent period, have already become favorite garden shrubs; and deservedly so, for their brightly colored flowers, intermixed with the glossy green foliage, produce a fine effect either in a flower-bed or on the lawn. Their culture is very simple, for they will thrive in any good garden soil. Plant either in autumn or spring, and in setting it out, dig a hole three feet in diameter, unless the shrub is very small, when two feet will do. No further care will be required, though if a good compost of manure be dug in around the roots every spring, the trouble will be repaid in a greater profusion of bloom.

Of the several varieties, *Weigela alba* has white flowers, which change to a pale rose tint;

Weigela nivea produces pure white flowers, very beautiful for large bouquets or vases; *Weigela rosea* bears apple-blossom colored flowers, blending pink and white in a lovely intermingling.

WEIGHTS AND MEASURES.

I.

CONVERTIBLE WEIGHTS AND MEASURES.

Sufficiently near correctness for all practical purposes. (For convenience in consultation, the following table is also given on the inside of the front cover).

Wheat flour, 1 pound is one quart.
Indian meal, 1 pound 2 ounces are 1 quart.
Butter, when soft, 1 pound is 1 pint.
Loaf sugar, broken, 1 pound is 1 quart.
White sugar, powdered, 1 pound 12 oz. are 1 quart.
Best brown sugar, 1 pound 2 ounces are 1 quart.
Ten eggs are 1 pound.
Sixty drops are 1 teaspoonful.
Four teaspoonfuls are 1 tablespoonful.
Two dessert spoonfuls are 1 tablespoonful.
A tablespoonful is ½ ounce.
Eight tablespoonfuls are 1 gill.
Thirty-two tablespoonfuls are 1 pint.
A common-sized sherry glass holds ½ a gill.
A common-sized claret-glass holds 1 gill.
A teacup holds from a gill to half a pint.
A common-sized tumbler holds ½ a pint.

When "wineglass" is used in this book without specification, it means sherry glass.

It must be borne in mind, however, that the foregoing are only approximations, and that in those receipts which evidently call for a delicate adjustment of proportions, they will not answer. The truth is, that every kitchen should be supplied with a good scale, as one of the most important items in its furniture; and it should be kept, moreover, in constant use. The neglect of this, and the habit of resting satisfied with "about the right proportion," when exactness is of the utmost importance, is one of the most serious vices of American cookery.

II.

LIQUID MEASURE.*

Used in measuring all kinds of liquids.

Ale, beer, porter, and milk, were formerly sold by what was called *Beer Measure*, of which the gallon contained 282 cubic inches.

4 gills (gi.)	are	1 pint,	pt.
2 pints,		1 quart,	qt.
4 quarts,		1 gallon,	gal.

A hogshead (hhd.), when regarded as a measure, is 63 gallons equal 252 quarts, 504 pints, or 2016 gills; but the term is often applied to large casks of varying capacity.

A *barrel* (bbl.), in some States is 31 ½ gallons, and in others 28 to 32 gallons.

APOTHECARIES reckon one pint (O) equal to 16 fluid ounces (f. ℥); 1 fluid ounce equal to 8 fluid drams (f. ʒ).

The standard liquid gallon of the *United States* contains 231 cubic inches, and the Imperial gallon of *Great Britain*, 277.274 cubic inches.

III.

DRY MEASURE.

Used in measuring such dry articles as grain, fruit, roots, coal, etc.

2 pints (pt.)	are	1 quart,	qt.
8 quarts,		1 peck,	pk.
4 pecks,		1 bushel,	bu.

The *chaldron*, a measure of 36 bushels, formerly employed with some kinds of coal, is now seldom used.

The standard bushel of the *United States* contains 2150.42 cubic inches; and the Imperial bushel of *Great Britain*, 2218.192 cubic inches.

IV.

TROY WEIGHT.

Used for weighing gold, silver, jewels, and drugs in prescriptions.

24 grains (gr.)	are	1 pennyweight,	dwt.
20 pennyweights,		1 ounce,	oz.
12 ounces,		1 pound,	lb.

A pound Troy contains 240 pennyweights, or 5760 grains.

APOTHECARIES, in mixing medicines, use the *pound*, *ounce* (℥), and *grain*, of this weight; but divide the ounce into 8 *drachms* (ʒ), each equal to three *scruples* (℈), each scruple being equal to 20 *grains*.

A *carat*, for gold-weight, is 4 grains; for diamond-weight, is 3.2 grains.

V.

AVOIRDUPOIS WEIGHT.

Used for nearly all articles estimated by weight, except gold, silver, jewels, and drugs in prescriptions.

16 drams (dr.)	are	1 ounce,	oz.
16 ounces,		1 pound,	lb.
25 pounds,		1 quarter,	qr.
4 quarters, or 100 lb.,		1 hundred-weight,	cwt.
20 hundred-weight,		1 ton,	T.

Formerly, 112 pounds, or 4 quarters of 28 pounds each, were reckoned a hundred-weight, and 2240 pounds a ton, now called the long ton. This is now seldom employed in this country, except at the mines for coal, or at the United States Custom-houses for goods imported from Great Britain, in which country such weights continue to be used.

A pound Avoirdupois is equivalent to 7000 grains Troy, so that 144 pounds Avoirdupois are equal to 175 pounds Troy.

VI.

LINEAR MEASURE.

12 inches (in.)	are	1 foot,	ft.
3 feet,		1 yard,	yd.
5½ yards,		1 rod,	rd.
40 rods,		1 furlong,	fur.
8 furlongs,		1 common mile,	m.

* The tables from here on are principally condensed from Greenleaf's Practical Arithmetic, Robert S. Davis & Co., Boston.

A mile is 320 rods = 1760 yards = 5280 feet = 63360 inches.

In measuring *cloth* and other woven fabrics, the linear yard is divided into *halves*, *quarters*, *eighths*, and *sixteenths*. Formerly a sixteenth of a yard, or 2¼ inches, was called a *nail*.

An *engineer's chain*, or *measuring tape*, is usually 100 feet in length, with each foot divided into tenths. Surveyors, however, make frequent use of *Gunter's chain*, which is 4 rods, or 66 feet, in length, and divided into 100 links of 7.92 inches each. Links are usually expressed as hundredths of a chain.

Six feet equal 1 *fathom*, in measuring depths at sea; and 3 common miles equal 1 *league* on the land.

A *geographic* or *nautical mile* is $\frac{1}{60}$ of the length of a degree of latitude.

The United States coast survey employ 6086.34 feet, or 1.15 + common miles, as the average length of a nautical mile, and 69.16 common miles as the length of *a degree of longitude* on the equator.

VII.

SURFACE MEASURE.

144 square inches (sq. in.)	are 1 square foot.	sq. ft.
9 square feet,	1 square yard,	sq. yd.
30¼ square yards,	1 square rod or perch,	P.
160 square rods or perches,	1 acre,	A.
640 acres,	1 square mile,	M.

An acre is 4840 square yards = 43560 square feet = 6272640 square inches.

In surveying by Gunter's chain, 1 *square chain* is 16 square rods, and 10 square chains are 1 acre.

In measurement of government lands, 640 acres, or 1 square mile, make 1 *section of land*.

A *rood* equals 40 square rods or perches, but this denomination is not now much used.

VIII.

SOLID MEASURE.

1728 cubic inches (cu. in.)	are 1 cubic foot,	cu. ft.
27 cubic feet,	1 cubic yard,	cu. yd.
128 cubic feet,	1 cord,	C.

A solid yard, or 27 solid feet, is equal to 46656 solid inches.

IX.

TIME MEASURE.

The Calendar Months, their names, order, and number of days, are as follows:

January,	1st mo.	31 days.	July,	7th mo.	31 days.
February,	2d "	28 or 29.	August,	8th "	31 "
March,	3d "	31 days.	September,	9th "	30 "
April,	4th "	30 "	October,	10th "	31 "
May,	5th "	31 "	November,	11th "	30 "
June,	6th "	30 "	December,	12th "	31 "

A common year has 8760 hours, equal 525600 minutes, or 31536000 seconds.

The number of days contained in each month may be remembered by recollecting that *the months are long and short alternately*, with the exception of August, which, as well as July, is *long*.

A *true year*, also called a *solar* or *tropical year*, is the exact time in which the earth makes a revolution around the sun, or 365 d. 5 h. 48 m. 49.7 sec.

The common year of 365 days comes short of the true year 5 h. 48 m. 49.7 sec., or 1 day (lacking only 44 m. 41.2 sec.), in 4 years, so that an approximate correction of the calendar can be made by having every fourth year of 366 days.

But, by making every fourth year a leap-year, there will be a gain in the calendar of 13 h. 37 m. 10 sec. in 100 years, or a little over 8 days in 400 years; hence, a second approximate correction can be made by having only every fourth of the centennial years a leap year. Hence,

Every year whose number can be divided by 4 without a remainder, except centennial years, and every centennial year whose number can be divided by 400 without a remainder, is a leap year and the others are common years.

X

MISCELLANEOUS MEASURES.

Counting.		Paper.	
1 dozen,	is 12 units.	1 quire,	is 24 sheets.
1 gross,	12 dozen.	1 ream,	20 quires.
1 score,	20 units.	1 bundle,	2 reams.
1 hundred,	5 scores.	1 bale,	5 bundles.

Capacity.

56 pounds of butter,	are 1 firkin.
64 pounds of soap,	1 firkin.
56 pounds of rye,	1 bushel.
56 pounds of corn,	1 bushel.
60 pounds of wheat,	1 bushel.
60 pounds of beans,	1 bushel.
60 pounds of potatoes,	1 bushel.
60 pounds of clover seed,	1 bushel.
100 pounds of fish,	1 quintal.
100 pounds of grain,	1 cental.
112 pounds of vegetables,	1 barrel.
196 pounds of flour,	1 barrel.
200 pounds of beef or pork,	1 barrel.
256 pounds of water,	1 barrel.

Meal, either of *Indian corn* or *rye*, is usually estimated at 50 pounds to a bushel, and *wheat bran* at 20 pounds to a bushel.

A quarter of *grain*, in England, is equal to 8 Imperial bushels, or to 560 pounds.

A *perch* of masonry, or of building stone, is 24¾ cubic feet.

A ton of timber is commonly estimated at 40 solid feet, but as usually measured is 50 solid feet.

With transportation companies a ton of freight is quite variable, being for many articles estimated by the space occupied, and for others by weight.

Four inches equal 1 *hand* in measuring the height of horses directly over the fore feet.

A pile of wood 8 feet long, 4 feet wide, and 4 feet high, is a cord. A cord foot (c. f.) is 1 foot in length of this pile, or 16 cubic feet.

METRIC OR DECIMAL SYSTEM.

The **Metric System** of weights and measures, authorized by Congress, in 1866, to be used in the United States, was devised in France, according to the decimal scale.

The Higher Denominations of a weight or measure are expressed by prefixing to the name of its principal unit.

DEKA, 10, HECTO, 100, KILO, 1000, MYRIA, 10000;

and the LOWER DENOMINATIONS by prefixing

DECI, 10th, CENTI, 100th, MILLI, 1000th.

I.

METRIC MEASURES OF LENGTH.

The **Meter**, the principal unit for the measure of length, is very nearly one ten-millionth of the distance on the earth's surface from the equator to the pole.

10 *millimeters* (mm.)	are 1 *centimeter* (cm.),	=to	.3937 inch.
10 centimeters,	1 decimeter,		3.937 inches.
10 decimeters,	1 METER (me.),		39.37 inches.
10 meters,	1 dekameter,		393.7 inches.
10 dekameters,	1 hectometer,		328 feet 1 in.
10 hectometers,	1 *kilometer* (km.),		3280 ft. 10 in.
10 kilometers,	1 myriameter,		6.2137 miles.

The *meter* is used as the unit of measure for all common lengths and distances. It is about 3 feet 3 inches and 3 eighths of an inch in length.

The *kilometer* is taken as the unit in measuring long distances, as the length of roads, distances between cities, etc. It is about 200 rods, or $\frac{5}{8}$ of a mile.

25 millimeters nearly replace the *inch*, 3 decimeters the *foot*, 5 meters the *rod*, and 1600 meters, the *mile*.

II.

METRIC MEASURES OF SURFACE.

The **Square Meter**, the principal unit for the measure of surface, is the square whose side is one meter.

100 *sq. millimeters* (mm. ^{2}), are 1 *sq. centimeter* (cm.^{2}),	=.00155 sq. in.	
100 sq. centimeters,	1 sq. decimeter,	.1076 sq. ft.
100 sq. decimeters,	1 SQ. METER (m. ^{2}),	1.196 sq. yd.

Since the side of a square meter is 1 meter, or 10 decimeters, a square meter is equal to $10 \times 10 = 100$ square decimeters; since the side of a square decimeter is 1 decimeter, or 10 centimeters, a square decimeter is equal to $10 \times 10 = 100$ square centimeters, etc. Hence,

The scale is 100, and two orders of figures must be allowed to each denomination.

The **Are**, the principal unit in measuring land, is a square whose side is ten meters.

100 centiares are	1 ARE (ar.),	equal to	119.6 sq. yd.
100 ares,	1 *hectare* (ha.),		2.471 acres.

A *centiare*, or square meter, is about $1\frac{1}{5}$ square yards, and a *hectare* about $2\frac{1}{2}$ acres.

40 ares nearly replace an *acre* of common surface measure.

III.

METRIC MEASURES OF VOLUME.

The **Cubic Meter**, the principal unit for the measure of volume, is the cube whose edge is one meter.

1000 *cu. millimeters* (mm^3), are 1 *cu. centimeter* (cm.^{3}),	=.061 cu. in.	
1000 cu. centimeters,	1 cu. decimeter,	60.012 cu. in.
1000 cu. decimeters,	1 CU. METER (m.^{3}),	1.308 cu. yd.

Since the edge of a cubic meter is 1 meter, or 10 decimeters, a cubic meter is equal to $10 \times 10 \times 10 = 1000$ cubic decimeters; since the edge of a cubic decimeter is one decimeter, or 10 centimeters, a cubic decimeter is equal to $10 \times 10 \times 10 = 1000$ cubic centimeters, etc. Hence,—

The scale is 1000, and three orders of figures must be allowed to each denomination.

The **Liter**, the principal unit for liquid or dry measure, is a cubic decimeter.

10 milliliters	are 1 *centiliter* (cl.),	equal to	.338 fluid oz.
10 centiliters,	1 deciliter,		.845 gill.
10 deciliters,	1 LITER (lt.),		1.0567 quarts.
10 liters,	1 dekaliter,		2.6417 gallons.
10 dekaliters,	1 *hectoliter* (hl.)		26.417 gallons.
10 hectoliters,	1 kiloliter,		264.17 gallons.

The *liter* is used in measuring liquids, and is about $1\frac{1}{18}$ liquid quart.

The *hectoliter* is used in measuring grain and like articles, and is 2.837 bushels, or about $2\frac{5}{6}$ bushels, or $\frac{5}{6}$ of a barrel; a liter is very nearly .908 of a dry quart.

4 liters a little more than replace the *liquid gallon*, and 35 liters very nearly the *common bushel*.

A *milliter* is equal to 1 cubic centimeter; a *centiliter* is equal to 10 cubic centimeters.

The **Stere**, the principal unit for measuring wood, is a cubic meter, or 1000 liters.

10 decisteres	are 1 STERE (st.),	equal to	1.308 cubic yards.
10 steres,	1 dekastere,		13.08 cubic yards.

36 decisteres, or 3.6 steres, very nearly replace the common *cord*.

IV.

METRIC WEIGHTS.

The **Gram**, the principal unit of weights, is the weight, in a vacuum, of a cubic centimeter of distilled water, at its greatest density.

10 *milligrams*	are 1 centigram,	equal to	.1543 grains.
10 centigrams,	1 decigram,		1.543 "
10 decigrams,	1 GRAM (gm.),		15.432 "
10 grams,	1 dekagram,		.3527 av. oz.
10 dekagrams,	1 hectogram,		3.5274 "
10 hectograms,	1 *kilogram*, (k.),		2.2046 av. lb.
10 kilograms,	1 myriagram,		22.046 "
10 myriagrams,	1 quintal,		220.46 "
10 quintals,	1 millier, or *tonneau* (t.),		2204.6 "

The *kilogram*, or, for brevity, *kilo*, is the ordinary weight of commerce. It is about $2\frac{1}{5}$ lbs.

The *tonneau* (pronounced *tonno*), or *metric ton*, is used in weighing heavy articles, and is about 2200 pounds.

The *gram* is used in mixing medicines, weighing letters, gold, jewels, etc. 28 grams nearly replace an avoirdupois ounce; and $\frac{1}{2}$ kilo, a little more than a pound.

In expressing Metric Weights and Measures, by figures, the decimal point, as in United States money, is placed between the unit and its subdivisions written as decimal orders.

One, two, or three orders of figures must be allowed to each denomination lower than the unit, according as the scale is 10, 100, or 1000. Thus :—

3 kiloliters, 7 hectoliters, 2 dekaliters, 5 liters, 6 centiliters, is written, as liters, 3725.06 lt.

4 cubic meters, 630 cubic centimeters, as cubic meters, 4.00063 m.^{3}

The *integer* of a metrical expression may be read as a number of its primary unit; and the *decimal part*, if any, as a number of the lowest denomination denoted. Thus :—

360.075 kilos may be read as three hundred and sixty kilos, and seventy-five grams.

36.15 meters, as thirty-six meters, and fifteen centimeters.

V.

COMPARATIVE METRIC AND ENGLISH TABLE

of equivalents determined only approximately; but sufficiently exact for all ordinary business.

A meter	= 39.37 inches.	An inch	= .0254 meter.
A meter	= 3.28 feet.	A foot	= .3048 meter.
A meter	= 1.0936 yards.	A yard	= .9144 meter.
A kilometer	= .62137 mile.	A mile	= 1.6093 kilometers.
A sq. meter	= 1550 sq. ins.	A sq. in.	= .0006452 sq. meter.
A sq. meter	= 10.76 sq. feet.	A sq. ft.	= .0929 sq. meter.
A sq. meter	= 1.196 sq. yds.	A sq. yd.	= .8361 sq. meter.
An are	= 3.953 sq. rods.	A sq. rd.	= .2529 are.
A hectare	= 2.471 acres.	An acre	= .4047 hectare.
A hectare	= .00386 sq. mile.	A sq. m.	= 259 hectares.
A liter	= 33.81 fluid oz.	A fld.oz.	= .02958 liter.
A liter	= 1.0567 quarts.	A quart	= .9465 liter.
A liter	= .26417 gallon.	A gallon	= 3.786 liters.
A hectoliter	= 2.837 bushels.	A bush.	= .3524 hectoliter.
A liter	= 61.022 cu. ins.	A cu. in.	= .01639 liter.
A hectoliter	= 3.531 cu. feet.	A cu. ft.	= .2832 hectoliter.
A stere	= 1.308 cu. yds.	A cu. yd.	= .7646 stere.
A stere	= .2759 cord.	A cord	= 3.625 steres.
A gram	= 15.432 grains.	A grain	= .0648 gram.
A kilogram	= 35.27 av. ozs.	An av. oz	= .0283 kilogram.
A kilogram	= 2.68 Tr. lbs.	A Tr. lb.	= .373 kilogram.
A kilogram	= 2.2046 av. lbs.	An av. lb	= .4536 kilogram.
A tonneau	= 1.1023 tons.	A ton	= .9071 tonneau.

WELSH RAREBIT.—The English method of preparing this savory dish is as follows: Grate some Gloucester or Gruyère cheese and season it with cayenne pepper. Fry some slices of bread with a little butter, but on one side only, until perfectly yellow, then spread a thick coat of the grated cheese on the fried side of the bread, place the slices in a baking-pan, put it in a moderate oven, take it out when the cheese begins to melt, and serve warm. Any good, dry cheese will answer for this, probably.

The American method is different: Cut a pound of cheese in slices a quarter of an inch thick; put a heaping table-spoonful of butter in a frying-pan, and when it has melted, lay in the cheese, and cook about five minutes; then add two eggs well beaten, a dessert-spoonful of mixed mustard, and a little pepper; stir it up; have ready some slices of buttered toast, turn the cheese over it, and serve as hot as possible. The eggs may be omitted if the flavor of the cheese is liked without disguise.

WEN.—Wens are encysted tumors, most frequently met with on the scalp or eyebrows. The treatment of such tumors consists in their removal: if very small, simply pressing their contents out may prove sufficient; but, if large and unattached, an incision through the skin and down upon the cyst wall, with the subsequent laying bare of the entire cyst with its contents, is necessary. If the tumor is very large, and its cyst-wall thin and adherent, removal must be effected by regular dissection. It must be borne in mind, that unless the cyst or bag is removed there is every probability of the tumor returning. These tumors may occur in the neck, and a somewhat favorite locale is just under the angle of the lower jaw. It is well to remark that wens should be removed by a surgeon as soon as they are noticed, as the scars increase in size, and are horribly unsightly if situated in any prominent place; their removal is safe, and generally unattended with any great pain.

WET NURSE.—When it is impossible for a mother to nurse her infant herself, it remains either to get another woman to nurse it, that is a wet nurse—or to feed it in some other way. To the latter is applied the term "artificial feeding," and it is treated of in the article on INFANTS. The wet nurse is to be preferred, for the child's good, to feeding, though a choice is not always practicable. In selecting a wet nurse, it is always advisable to cause her to be examined by a physician. There are so many particulars which are of importance, but which do not attract the notice of outside persons, that this is the safest course. She should be perfectly healthy and free from the taint of hereditary or other constitutional disease, that the child's constitution may not be contaminated. The mother may be aided, however, in making her selection by bearing in mind the following points, the substance of which is taken from Dr. Edward H. Parker's *Hand Book for Mothers*:—

1. The nurse's milk should be of about the same age with the mother's; that is, her child should have been born at about the same time with the one she would nurse. The milk furnished by a woman varies at different times, changing from the first that is drawn, to the last. A woman with a new breast of milk—that is, who has just been confined—is not fitted to nurse a child who is six months old; neither is a woman with a six months' breast of milk, the best fitted to nurse one just born. This is, however, a consideration of less importance after the infant is six months old. After that time it is safer to choose a woman who has not nursed more than six months.

2. If there are two women, in other respects of equal qualifications, one of whom has a child still living which she has put out to nurse, while the other has lost her infant, — without hesitation select the latter.

3. The age of the nurse should not usually be under twenty years, or over twenty-eight, this being about the period at which they are most apt to yield a rich, healthy milk.

4. A woman with brown or black hair, should be selected in preference to one with light or red hair; and of the last two, the former should have the preference. The reason is simply this, that light haired women, although they often have more milk than those who are of a darker complexion, do not furnish in it so much nourishment; their milk is more watery, though it may be more abundant. Red haired women are apt to be quicker to become angry, and to have tempers not so well regulated as others.

5. The nurse should be of good form and plump, with a white, hard breast, marbled with bluish veins, aud a nipple of good size, perfectly free from cracks and eruptions, with gums firm and red, and with good teeth. The general appearance of the face should be that of health.

6. It is scarcely necessary to add that it is desirable to select for a nurse a woman of

gentle disposition and of a good degree of intelligence, rather than a stupid or irascible one.

It may be of use to some readers to say that wet nurses very rarely need beer, ale, or other malt liquor, to enable them to perform their duties. These drinks are often necessary to a feeble mother, to enable her to bear the drain upon her; but a woman who requires them ought not to become a wet nurse. The habit of taking stronger liquors, as brandy, gin, or whiskey, is a good and sufficient reason for rejecting a nurse. Their influence on the child is injurious.

WHALEBONE.—A hard substance found in the mouth of the whale. This animal has no teeth, but instead of them, a number of long strips of whalebone, having fringes on their edges, through which it strains the sea water, retaining the food contained in it, consisting of abundance of small creatures. The number of strips of whalebone amounts to about 300; and they are from twelve to fifteen feet long, ten to twelve inches broad, and about half an inch thick. They consist only of parallel fibres, consequently are easily rent or split. From its elasticity, strength, and lightness, whalebone is employed for many purposes: for stiffening corsets and dress-waists; for ribs to umbrellas and parasols; for the framework of hats, etc. When heated by steam, it is softened, and may be easily moulded, like horn.

WHEAT.—Wheat is preferable to any of the other great vegetable products on which men chiefly live, since it is a far more agreeable food than maize or Indian corn, and a more nutritious food than rice. It contains within itself nearly all the essential elements of nutrition; and it is probable that the health and mental and bodily vigor of the inhabitants of temperate climes are more attributable to this food than to any other single cause. Wheat is of two principal kinds, known as white and red wheat; but there are numerous varieties which do not affect the color of the grain. The red is the stronger food, and the grain is usually small and hard; while the white is a large grain, particularly adapted to the production of fine white flour, and to mix with red wheat for the same purpose. The red variety is the most widely grown, and possesses greater nutritive properties. Wheat is commonly used in the form of flour. (*See* FLOUR.) *Cracked wheat* and *crushed wheat* contain the entire substance of the grain, which is crushed or broken so that the gastric juices may act upon it more easily. When boiled to the consistency of mush it makes a wholesome and nutritious food, which is believed to be especially serviceable in the treatment of dyspepsia and kindred diseases. It should be very thoroughly cooked, and eaten with milk.

WHEY.—This pleasant, slightly acid beverage is found naturally on buttermilk or clabber when it has stood for some little time. It may be produced in a few minutes at any time by putting into boiling milk as much alum, cider, lemon-juice, or vinegar, as will turn it and make it clear; then pour it off, add some hot water, and sweeten.

Tamarind Whey.—Mix an ounce of tamarind pulp with a pint of milk, strain it, and add a little white sugar to the whey.

Wine Whey.—Set on the fire in a saucepan a pint of milk; when it boils pour in as much white wine as will turn it and make it clear; boil it up and set it aside till the curd has settled, then pour off the whey, add half as much boiling water and sweeten it.

WHIPS.—Take a pint of rich cream, sweeten it slightly, and flavor it with any extract that may be preferred; put it in a deep dish, and set it in the ice for half an hour; whip it gently with the whip-churn and as the froth rises place it on a reversed sieve to drain. It may be served plain heaped on the dish; or, put jelly or jam in the bottom of jelly-glasses, a spoonful to each, and fill the glasses with the whip.

Colored Whips may be made by adding to the cream a few spoonfuls of jelly, or juice of any kind of fruit, of the color preferred.

WHISKEY.—An ardent spirit distilled from barley, rye, Indian corn, wheat, etc. It is the cheapest and the most common form of intoxicating liquor made in the United States, where its production is very large. The whiskey of Pennsylvania and Kentucky, and the better qualities of that manufactured in New York, are distilled chiefly from rye; most of that produced in the Western States is from Indian corn, which contains a large quantity of fusel-oil. The *peach* whiskey, the *Monongahela* of Pennsylvania and the *Bourbon* from Kentucky are accounted the best. The peculiar and much-liked flavor of Scotch and Irish whiskey is said to be due to the peaty water which is obtained in the mountains for the use of the stills, or to the smoke of the fuel which is used. New whiskey is rough and fiery, quickly intoxicates, and produces disease of the mucous membrane of the stomach, of the liver, spleen, and kidneys. It is desirable, therefore, that it should be kept some years, that it may generate volatile oils, and obtain mellowness. The most approved course is to fill a sherry cask with it and leave it quiet; it will thus acquire color and flavor.

Cocktail (Whiskey, Brandy, Gin, or Sherry).—Put about half a teaspoonful of Boker's bitters, or any bitters, in a tumbler, a teaspoonful of sugar, or sugar to taste, fill the glass with coarsely-pounded ice, and put in a wineglass of the liquor. Stir well, and then drain into a claret glass. Put in finally a small piece of lemon-peel, which first twist with the fingers over the glass to express the oil.

Sling (Whiskey).—Fill a tumbler with coarsely-pounded ice. Then fill the interstices quarter or third full of whiskey, add one or two teaspoonfuls of sugar, or to taste, fill with water, and stir or shake until thoroughly cold.

WHITE-FISH.—An excellent fish of the salmon family, abundant in the Northern lakes. Being difficult to keep fresh they are scarce except near where caught. The

usual size and form of this fish are about the same as those of the shad, but the head is sharper, and the color of the back is bluish black, while the belly is white. Another variety is known as the *Otsego shad salmon*, and is very abundant in Otsego Lake. This fish is of a dusky gray on the back, and striped like the striped bass. Whitefish weigh from one and a half to five or six pounds. Bake and boil as directed for SALMON; broil and fry as directed for MACKEREL. The small ones, of course, are best for the latter purpose.

WHITE-LEAD.—This pigment forms the basis of all oil paints, the different tints and shades being made by adding colored pigments to it. As much of the beauty and durability of the paint depend upon the goodness of the white employed as the basis, especial care should be taken to have this genuine. When a large quantity is wanted, it is safest to purchase it at the white-lead works where it is made; but even there it is not always free from adulteration. When sold at retail, white-lead is frequently adulterated with chalk, barytes, or other white mineral substances, which very much injure its quality, causing it to have less body, and also to turn yellow when made into paint. Adulteration with chalk may be detected by dissolving a little diluted nitric acid, filtering it, and adding a little oxalate of ammonia; if chalk be in the white-lead, a cloudy white precipitate of oxalate of lime will appear when a little of the white-lead is dropped into it. An easy and tolerably effective test is to lift some of the white-lead on a knife and let it fall back into the can. If perfectly pure it will be found "ropy;" while adulterated lead is generally short and crumbling. It is cheapest in the end to buy the best white-lead procurable. It is improved by keeping.

WHITES. (*See* MENSTRUATION.)

WHITEWASH.—A good whitewash for walls is made by adding to fresh slaked lime and water a solution of starch, a little salt, and a few drops of dissolved indigo or blueing. Boil the starch to a thin gruel, adding the salt while it is boiling, and pour the whole into the lime and water while the latter is warm from the heat engendered in slaking; then add the blueing to remove the yellow tint of the mixture, and use. Colors may be added if desired, but the use of poisonous colors, such as Paris Green, should be avoided.

The whitewash must be laid on with a large flat brush, as directed for KALSOMINING. When old ceilings are whitewashed, it is difficult sometimes to hide the stains; the best way is firs to wash and scrape off with a trowel the old whiting and dirt, the surface being first wetted with a flat brush, and to stop up all the cracks and defective places. In cornices, a good deal of care must be taken in scraping out the leaves and ornaments. The ceiling must dry thoroughly after this operation before the whitewash is laid on.

WHITING.—This fish is also called *King-fish.* It is small, the color on the back and sides is a dark bluish gray, and the belly is white and silvery. The flesh is solid and sweet. In the Southern fish-markets, Whiting is abundant, but above Chesapeake Bay it is by no means regular in its appearance, several seasons sometimes elapsing without any being seen. It is in season from May to September. The usual weight is about three quarters of a pound, and few are found weighing as much as two pounds.

Broiled Whiting.—Clean, wash, and dry the fish; sprinkle them with salt and spread butter over them, and broil them on both sides over a clear fire.

Fried Whiting.—Clean, wash, and dry the fish; lay them in a flat dish, salt, and dredge them with flour; have ready a frying-pan with plenty of hot lard, butter, or dripping; put in as many fish as the pan will hold without crowding, and fry to a light brown on both sides.

WHITING. (*See* CHALK.)

WHITLOW. (*See* BONE-FELON.)

WHOOPING-COUGH.—The popular idea that whooping-cough is a disease of slight importance, to be ranked among the lightly-regarded "children's affections," such as rash or thrush, is an utterly mistaken one, and has doubtless cost many an infant its life. The fact is that whooping-cough is dangerous in the highest degree, especially in children under three years of age. Even in tolerably mild cases the brain may be affected and the bowels deranged; and in cases of great severity a strain is put upon the entire system which taxes its powers to the utmost. The earliest symptom of whooping-cough is a common cold, accompanied by a cough which at first has nothing distinctive about it; there is also a slight amount of fever, restlessness, and sometimes running at the eyes and nose. In a few days the cough becomes more troublesome, and some glairy fluid may be brought up from the chest; in a week or ten days, but oftener later, the child will begin to have the characteristic "whoop." The cough comes on in paroxysms, and is more frequent by night than by day; each paroxysm begins with a deep and loud inspiration, followed by a succession of short and sharp expirations, again followed by a deep and loud inspiration, and the repeated expiration; this may go on several times, and last one or two minutes according to the severity of the case. Just before each attack comes on, the child clings to its nurse or mother; it sits in an erect position; during the paroxysm the face is flushed, the veins in the head and face are prominent, the eyes suffused and watery, and generally there is some glairy fluid expelled from the mouth or vomiting may come on. After a paroxysm the child will rest for a time, and appear pretty well until the next attack comes on. In bad cases there may be twenty or thirty paroxysms a day, and several fits of coughing besides in which the whoop is not heard; in ordinary cases there are from four to ten spasmodic attacks in the twenty-four hours. These symptoms last for three or

four up to ten weeks, and then the cough abates in severity and frequency, and finally ceases altogether; but after the whooping has ceased the child may continue to have a troublesome cough for some time. In most cases there is some bronchitis attending this complaint, and this is shown by the hurried breathing, rise of temperature, and rattling noises over the chest. Convulsions are a bad sign, and this is generally the way in which such cases die. Whooping-cough cannot be made out until the characteristic whoop appears. As it is highly contagious, however, its onset may be expected if a common cough follows exposure to it.

Treatment.—In all cases it is best for the child to be kept in the house in bad or doubtful weather, as soon as the malady has declared itself, as the danger is greatly increased if it takes cold. In a mild case it need not be put to bed, but it should be in a warm and even temperature, and protected from draughts. If there is any lung affection, the child must be put to bed. If the breathing be very bad, put a hot mustard and oatmeal poultice on the chest, and if the chest is a good deal stuffed and the child does not offer to vomit after the coughing paroxysm, a teaspoonful of syrup of ipecac may be given with advantage. The child must be fed in the usual way, but solid food should be given sparingly. When the infant has some other disease, as rickets, etc., the treatment proper for that disease may be continued. Steel wine is very valuable in cases of whooping-cough, more especially when there is no fever, and during convalescence: it may also stop the diarrhœa which is often present. If there is any protrusion of the bowel, the part should be sponged lightly with a solution of sulphate of iron, and at once returned. This is often due to the excessive diarrhœa, and steel wine must be given internally. Numberless remedies have been tried for the cure of whooping-cough, but none have succeeded. Iron, alum, zinc, sulphuric acid, etc., have all failed to do much. The most hopeful remedy is belladonna, if given in large doses, and the symptoms watched; children can bear proportionably more of this drug the younger they are, but it is a dangerous remedy, and must never be ventured upon except under the direction of a physician. In cities a daily visit to the gas-works has been said often to abate the violence of the disease. When the cough has gone on for some weeks, complete change of air is desirable. During convalescence, warm clothing should be worn, and the diet should be light and nourishing.

WHORTLEBERRY. (*See* HUCKLEBERRY.)

WINDOW GARDENING.—This term is commonly so used as to include all in-door culture of plants, and as there is scarcely a shrub, flower, or vine that cannot be so cultivated, it will be seen that the subject is too comprehensive to be treated satisfactorily in a single article. All such general directions as apply to the culture of plants, in either house or garden, are given in the article on FLORICULTURE, while the special directions for each particular plant are given under the name of the plant itself. As a supplement to these, we add here a few comprehensive rules, applicable to all in-door floriculture, the substance of which is taken chiefly from Mr. E. S. Rand's excellent little book entitled, "Flowers for Parlor and Garden."

Pots. The common baked-clay flower-pots are the best, and of these the light-colored are better than the brick-red. Plants seldom thrive in fancy pots. If something ornamental is desired, have the fancy pots large enough to set the common pots inside, or ornamental frames over the common ones.

Potting. Always fill the lower end of the pot with broken potsherds, to secure drainage. In filling the soil around the plants, press it in firmly; there is no advantage in loose potting. In *re-potting* cut away as much of the old soil as possible (being careful not to injure the roots of the plant), and place the ball of the plant in the centre of the new pot, filling in all around with fresh soil. As a general rule, plants require repotting whenever the roots begin to curl around the inside of the pot. This can be ascertained by placing the palm of the hand over the top of the pot, turning the latter upside down, and tapping its rim sharply against some hard object; the plant and soil will generally come out into the hand, and can then be examined and returned. Stirring the surface of the soil is generally beneficial; or the top soil, as far down as the upper roots, may be removed, and the pot refilled with fresh soil.

Soil. The different kinds of soil used in flower-culture are: *peat*, which is the black earth usually taken from meadows or damp woods; *loam*, or common garden soil; *sand*, common or "silver," such as is used by glass-makers; *leaf-mould*, consisting of decomposed leaves found in the top-soil of old woods; and *manure*, taken from the barn-yard, and well rotted. These are used in varying proportions with different plants, but a good general soil for potting plants may be made as follows: four parts leaf-mould, two parts sand, two parts manure, one part loam, and one part peat.

Manuring is seldom needed with pot plants, and should be done very sparingly. A teaspoonful of guano dissolved in a quart of water and applied once a week will probably do no harm; or liquid stable manure may be used in the same proportion, and as seldom.

Exposure. Very few plants will flourish without sunlight, and consequently they must be placed near a window. Select the window which has most sun and has it longest.

Temperature. The temperature of a room in which flowers are cultivated should never be allowed to fall (even at night) below 40° or 45° Fahrenheit. This heat should be maintained by an open fire, or, if by an air-tight stove, a large pan of water should be constantly evaporating on it. Furnace heat is injurious. (*See* HEAT GOVERNOR, under WARMING.)

Ventilation is not less important than temperature. The best way is to open the top of the window, when the sun's rays are hottest on the plants. The quantity of air admitted must be proportioned to the outside temperature; in cold, cloudy days, but little, and often none, should be given. *Never allow a direct stream of cold air to blow upon any plant.*

Watering. The only positive rules that can be laid down are these: (1) Water *regularly*, once a day—the morning is the best time; (2) always use a watering-pot with a fine rose; (3) have the water neither cold nor warm, but just the temperature of the atmosphere of the room. A good rule, as far as it goes, is never to allow the soil to become either perfectly dry or sodden with moisture. Never allow water to stand in the saucers of the pots unless the plants are semi-aquatic.

Washing. The leaves of plants are filled with "stomata," or breathing pores, which allow exhalation when the leaves are clean. This process is very essential to the health of plants, and as the pores are easily stopped up by an accumulation of dust, the leaves, both upper and under sides, should be washed at least once a week. Use water moderately warm, and if the plants are very dirty, add a little soap-suds. This washing should be carefully done with a soft sponge in the case of plants with thick polished leaves, such as camellias or oranges; where the leaves are hairy or the substance is soft, use a small syringe fitted with a very fine "rose." Never wet flowers, nor allow drops of water to stand on any leaves, in the sunshine; the rays of the sun are brought to a focus in the drop of water, and scorch the leaf. Once a month the stem and branches of all hard-wood plants should be wiped off with a sponge dipped in lukewarm water.

Pruning. Not much of this is necessary. Should a branch grow out of place or die, cut it off neatly with a sharp knife; and, of course, remove all dead leaves and old blossoms.

Insects. The only insects that trouble house plants are the green fly, the mealy bug, the scale, and the red spider. The green fly may be killed by smoking with tobacco; put the plant under a barrel with smoking tobacco, let it remain fifteen minutes, and then give it a syringing. Mealy bug and scale must be searched for and destroyed; frequent spongings do much to keep down these pests. Frequent syringing of the foliage will keep away the red spider.

Window Boxes. An economical substitute for the elaborate Wardian and Waltonian cases may be secured by fitting a box into the window, and planting in it small vines, creepers, bulbs, etc., in such a manner as to produce a variety of green foliage. Of course the field of choice for this purpose is practically unlimited, but the following list includes, perhaps, the most desirable and popular plants:

Climbing Vines. Maurandya, Cobea, Calempelis, Pilogyne suavis, Physianthus albeus.

Trailing Plants. Var. Sweet Alyssum, Convolvulus Mauritanicus, Vinca Major Variegata, Moneywort, Ground Ivy, Geranium l'elegante, Thunbergia.

Foliage Plants. Begonia Weltoniensis, Dracena, Farfugium grande; Geraniums—Bronze, Tricolor, and Silver-leaf; Abutilon, variegated; Veronica variegata.

WINDOWS. (*See* CLEANING, PUTTY, and VENTILATION.)

WILL. (*See* LAW.)

WINE.—This term is usually applied only to the fermented juice of the grape; when other fruits, as currants, blackberries, gooseberries, elderberries, etc., are used instead of grapes in making it, the product is generally distinguished as *domestic* or *home-made* wine. Directions for making all the different kinds of home-made wines are given under the special fruit from which each is made; and information as to the choice and serving of the various wines commonly used in this country is given under the name of each. We shall confine ourselves here, therefore, to a few general observations which will apply equally to all wines.

The quantity of alcohol is the first element which determines their price. A duty is levied on all wines coming into this country, and those containing less than a certain percentage of alcohol pay less than those containing more. The proportion of alcohol in the stronger wines has been determined by Brande as follows:

Wine.	Alcohol, per cent.	Wine.	Alcohol, per cent.
Tokay	9.15	Roussillon	15.96
Hermitage, Red	11.40	Hermitage, White	16.14
Champagne	11.65	Lisbon	17.45
Vin de Grave	11.84	Sherry	17.63
Burgundy	12.20	Constantia	18.29
Hock	13.31	Madeira	20.31
Bordeaux Claret	13.53	Port	21.75
Marsala	15.14		

Wines, however, are not consumed for their alcohol alone; they contain other ingredients which they derive from the grape-juice, which give them taste and flavor. Thus, when fermentation of the grape-juice is not complete, a certain quantity of sugar is left, and according to the quantity of sugar left wines are said to be "sweet" or "dry." While hocks, clarets, and other light wines contain little or no sugar, port, sherry, and champagne always contain a large amount. In the case of port and sherry this sugar is added during the manufacture, in order to enable them to bear exportation.

There are three other qualities in wines which demand some consideration. The first is what is called the *bouquet* and the *flavor*. These things are sometimes confounded, but they are really different. The vinous flavor is common to all wines, but the *bouquet* is peculiar to certain wines. The substance which gives flavor to all wines is œnanthic ether, and is formed during the fermentation of the grape-juice. The *bouquet* of wines is formed in the

same way by some of the acids found in the grape-juice after fermentation combining with the ethyl of the alcohol, and forming ethers. These are the things which make one wine more pleasant to drink than another, and which give their high prices to the best wines. They are not detectable by any chemical agency; but it is the taste of these *bouquets*, and nothing else, which gives to one wine the value of five dollars a bottle, and to another fifty cents, when all other qualities are precisely the same.

The second point in the nature of wines is their color. Some wines are what is called "red" and others are "white." Ports, clarets, burgundies are all red; also many other wines. The red colors of these wines have been analysed with some care, but they do not seem to exert any influence upon the system. The most important agent in them is tannic acid, or tannin, which exists in some wines to a very large extent, and which is produced by the skins of the grapes used in making the wine. It gives an astringency to red wines which is not found in white. The other coloring matters described by chemists are *blue* and a *brown*. These also come from the skins of the grapes, and the latter is found in dark white wines as well as in red.

The other matters which give a character to wines are the saline compounds. These substances, which constitute the ashes of all vegetable tissues, exist in a varying quantity in all fruits, and are found dissolved in the juices of fruit; hence we find them remaining in wine after fermentation of the juice. The most abundant of these salts is bitartrate of potash (cream of tartar). Besides this, wines contain tartrate of lime, tartrate of alumina, tartrate of iron, chloride of sodium, chloride of potassium, sulphate of potash, and phosphate of alumina. These salts occur in the proportion of from one to four parts in the one thousand of wine. They do not make much difference in the flavor or action of wines; but their presence or absence is one of the surest indications of the genuineness of a wine. Those who manufacture wines with alcohol and water, and add a certain quantity of good wine to give a flavor, do not usually add these mineral constituents, which are always the best test of a pure wine.

Selection of Wines.—The various wines of Spain, Portugal, France, Germany, &c., are imported into this country chiefly in wood; but some of them, as the best qualities of the German and French wines, in bottle only, being packed in cases containing generally three dozen bottles each. The bottled wines are in most cases fit for consumption after two or three months' rest to recover the agitation caused by travelling, in which state they are said to be "sick." Wines in wood must frequently be kept for a considerable time, in order to deposit all the woody and mucilaginous matter, which is never afterwards competely thrown down if the wine is bottled too soon. The pipe or butt is therefore removed to a good cellar, which should be free from the jar of heavy traffic, and also of an even temperature, as near as possible to 50 degrees Fahrenheit. Here it may rest for three or four months, when a spile is to be inserted, and a sample tasted, by the state of which the purchaser is guided as to the propriety of bottling it at once, or of waiting for a further deposit of the objectionable matters. Wine should always be bottled before it has lost all the sweetness which it possesses, and the owner should not wait for it to acquire the exact amount of dryness which he expects it to have when bottled and fit for use. If he waits thus long he will find that instead of having a wine dry enough for his palate, it will be too thin, and perhaps acid, and will, in fact, be ruined forever. The exact degree of richness and fruitiness therefore required are only to be judged of by those who have had some little experience, and consequently the young housekeeper will do well to consult some friend upon this very important point. The particular vintage influences a good judge very materially in deciding, as he is aware that wine of a vintage known to produce a rich quality will always require a longer time to mature than that of an inferior year. Many other circumstances must always be taken into the account, as the kind of wine, and the taste of the party for or by whom it is chiefly to be used. Thus, many people like a thin and pale port, and for them it should be kept long in the wood, so as to discharge its color and fruitiness as quickly as possible; others, again, like quite the reverse, and for them the opposite plan must be adopted. Moreover many tricks are played with port wine, in order to hasten its arrival at maturity, such as destroying the color by charcoal, mixing with perry or cider, &c., &c.; but as these are never worthy the attention of those who intend to drink the contents of their cellars, the less said on the subject the better. The only sound advice to be given to a young housekeeper is, either to purchase his wine of a respectable retail wine merchant, or, if he choose to economise, and can trust to his own judgment or that of a friend, to buy it in the docks as imported. (*See* also the different wines.)

Adulteration of Wines.—To detect adulterations requires chemical analysis of so delicate an order that they cannot be applied by non-professional persons. M. de Cherville, the French chemist, however, gives the following simple test for deciding whether red wines are, or are not, artificially colored. Pour into a glass a small quantity of the liquid which you wish to test, and dissolve a bit of potash in it. If no sediment forms, and if the wine assumes a greenish hue, it has not been artificially colored; if a violet sediment forms, the wine has been colored with elder or mulberries; if the sediment is red, it has been colored with beet-root or Pernambuco wood; if violet-red, with logwood; if yellow, with poke ber-

ries; if violet-blue, with privet berries; and if pale violet, with sun-flower.

Bottling Wine.—Cold weather is the best for bottling wine. At all times of the year it is desirable to avoid stormy weather, and winds blowing from the south or west. The bottles should have been most carefully cleaned, for the slightest negligence in this particular may cause vexatious consequences. Shot or small nails are usually employed for this purpose, but are far from suitable. A shot or nail often remains fixed between the side of the bottle and the interior swelling; and the lead which thus remains in contact with the wine may, in certain cases, become a source of real poisoning. The iron is not injurious to health, but it spoils the color of red wines and blackens white ones. It is therefore much better to employ coarse gravel, which cleans the bottles perfectly, and a few grains of which, if left in the bottle, cause no inconvenience. The choice of corks is highly important. Some corks are very porous, and, although they stop the bottle well in appearance, they allow the wine to evaporate. Hard and dry corks have this effect. The best corks are those which are fine-grained, soft, yielding to the fingers, and showing few pores.

To insert the cock, you tap the cask about an inch and a half above the rim. As soon as a few drops of the liquid begin to issue, you withdraw the augur, and drive in the cock by hand, avoiding any shock which might disturb the lees. As you cannot always manage that, it is a good plan to put the tap in its place the day before bottling the wine. Beneath it, you set a salad-bowl or basin, to catch the wine which escapes when the cock is not turned back in time, and which runs over when a bottle is filled too full. The bottle applied to the tap to be filled ought to be held in a slanting position, to prevent the wine from forming a froth, which would hinder its being properly filled. The bottles should be perfectly corked as fast as they are filled. The cork is driven in with the bat till it projects only a quarter of an inch, or less. When the wine nearly ceases to flow by the tap, the cask is tilted behind, and kept in a position sloping forwards by means of a wooden wedge. The operation must be done steadily, and without shaking, to avoid disturbing the lees. But after the cask is once tilted, the wine left in it must be drawn immediately, whether it be clear or thick. The bottles of thick wine should be set on one side, upright, to settle, when they may be decanted into other bottles, and definitely corked. The corks should be covered with rosin, to prevent them from moulding and from being eaten by the insects with which many cellars abound. An excellent preparation for sealing bottles is, two pounds of rosin mixed with a quarter of a pound of yellow bees'-wax, or a couple of ounces of tallow, to prevent its being too brittle. It may be colored with red lead, red ochre, ivory black, or any other ingredient. Melt and mix it well in an earthen vessel over a gentle fire; then let it cool so as to be only just liquid, when you may dip necks of the bottles in it up to the rim round the neck. If the wax is too hot it may cause the necks of the bottles to split or burst. When the wine is all bottled it should be stored in a cool cellar, and on no account on the bottles' bottoms, or in damp straw, but on their sides, in sand.

Fining Wine.—White wines are usually fined by isinglass, in the proportion of about one ounce and a half (dissolved in a pint and a half of water, and thinned with some of the wine) to the hogshead. Red wines are generally fined with the whites of eggs, in the proportion of twelve or eighteen to the pipe; they must be well beaten to a froth with about a pint of water, and afterwards with a little of the wine, before adding them to the liquor. Gypsum is frequently used to clear muddy white wines. *Finings* are made by wine-coopers, of whom it is better to buy them than to make them yourself. A quart of finings should be allowed for a hogshead, and a pint for a quarter cask. After being fined, in about a month, wine will have settled so as to be fit to bottle. When wine does not clear the first time, rack it into a clean cask, to separate it from the lees, and fine again: or add to the second lot of finings a handful of silver sand. New red wines may have a handful of salt added to the finings for a pipe. When wine is chilled with frost, it should be covered with sacks, and the cellar warmed to about 60°.

Keeping Wine.—Wine is generally spoiled by contact with the air—the weaker kinds invariably. This fact answers the question frequently put by tyros: "What weak wine is there that I can keep uncorked several days?" There is none. It needs alcohol to keep it.

Air in the cask or bottle, taking the place of alcohol and water lost by evaporation, is fatal. Hence casks must be filled from other casks as rapidly as evaporation or leakage leaves any unfilled space. The leakage of a voyage is often fatal.

The temperature of the place where wine is stored should be as even and as near an average of 50 degrees Fahrenheit as possible. The upper rooms of average dwelling houses are safer than ordinary cellars. Frost is fatal, except to strong wines, so is excessive heat, even that of exposed positions in summer. Bottles should always be laid flat with their labels up, so that in handling them one may know where the deposit is and disturb it as little as possible.

The length of time which wines may be advantageously kept, depends mainly upon their strength. Considering this in each instance, it may be roughly stated for clarets and the light white wines, from three to ten years; for Burgundies and the heavier wines, from five to thirty years; for port, Madeira, and sherry, an almost indefinite period.

Serving Wine.—No wine should ever be iced by putting ice in it, but always by ice outside of it in another vessel. Wines to be

drunk of the temperature of the room may be gently warmed if necessary, but the better way is to let them stand in the room long enough to acquire the temperature naturally. (*See* CRADLE, COBBLER, DECANTING, DINNER, PUNCH, SANGAREE, AMERICAN WINES, HUNGARIAN WINES, and others under their specific names.)

WINE-CELLAR.—The wine-cellar in cities should be at the back of the house, so that the wine may not be jarred by passing vehicles. The temperature should be uniform, as near 50 degrees Fahrenheit as possible, and the cellar should be well ventilated. Sherry, port, and especially Madeira, ripen best in a room at the top of the house. No sink or sewer should be in the vicinity of the wine-cellar. Champagne should be carefully laid on the side or imbedded in sand, the bottles never being placed on end. Bottles of sherry, port, or Madeira, may be placed on end.

WINE-WHEY. (*See* WHEY.)

WINKLES. (*See* PERIWINKLES.)

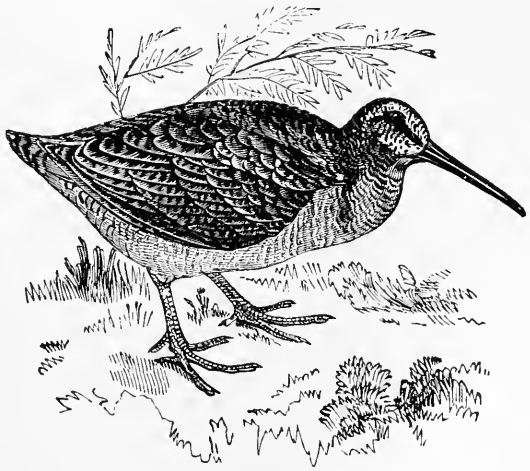
WINTERGREEN.—An aromatic creeping wild plant, bearing bright red berries, which grows in dry woods. The fresh leaves have a hot, tart taste, and are often used in flavoring soups, stews, and other dishes. As they are only good when fresh, they are not usually procurable in market. The plant has medicinal qualities as a tonic and diuretic.

WISTARIA.—There are several varieties of this beautiful vine. The *Wistaria Sinensis*, if trained properly, will cover the entire front of a house in two or three years. It bears long, pendulous clusters of pale blue flowers both in the Spring and Autumn. *W. Sinensis Alba* is a white variety, not so robust as the blue. The *W. Frutescens* (or American Glycine), is more of a dwarf habit than either of the above-mentioned. Simply put the seed into the ground or set out a cutting, and provide the vine with supports as it grows. It will thrive in any soil, and is perfectly hardy.

WOOD makes a more cheerful and healthy fire than any other fuel, but it consumes quickly, is expensive, and bulky to store, and must be kept very dry, as otherwise much heat is lost in converting its water into steam. The utility is in proportion to the weight, hence heavy woods are best. The lighter woods burn away very rapidly. Roughly speaking, coal will give out as much heat and last as long as twice its weight of wood. (*See* WARMING. For description of ornamental woods, *see* FURNITURE.)

WOODBINE.—A vigorous, hardy vine, of large, dark, glossy leaves, climbing fifty feet. The flowers are inconspicuous and greenish. It bears small, dark blue berries. It is cultivated like the Honeysuckle, thrives in any good garden soil, requires plenty of water, and to look well should be carefully trained.

WOODCHUCK—Also called *ground-hog.*—A small, stout, brown animal, weight from eight to twelve pounds. In the Fall it is very fat, when the flesh of the young is said to be quite palatable, tasting like pig. The old ones are tolerably good, but are much better after having been frozen for some time. Cook the young as directed for PIG, and the old ones like OPOSSUM.



WOODCOCK.—A fine bird will weigh half a pound. The English bird is larger. Is in season from the 1st of July to the 1st of November, and is considered best in the month of October.

Broiled Woodcock.—Clean carefully, split down the back, and broil over a clear fire. Butter, pepper and salt when done, and let them lie for five minutes between two hot dishes before sending to table.

Roast Woodcock.—*Do not draw them*, but after having wiped them with clean soft cloths, truss them with the head under the wing and the bill laid close along the breast; pass a small skewer through the thighs, catch the ends with a bit of twine, and tie it across to keep the legs straight. Suspend the birds, with feet downwards, to a bird-spit, flour them well, and baste them with butter, which should be ready melted in the pan or ladle. Before

the trail begins to drop, which it will do as soon as the birds are well heated, lay a piece of buttered toast into the pan under them to catch it, as this is considered finer eating than even the flesh of the birds; continue the basting, letting the butter fall from them into the spoon or ladle, as it cannot be collected again from the dripping-pan should it drop there, in consequence of the toast being in it. There should be a piece of toast for each woodcock, and the trail should be spread equally over it. When the birds are done, which they will be, at a brisk fire, in from fifteen to twenty minutes, lay the toasts into a very hot dish, place the birds upon them, pour a little gravy round the head, and send more to table in a tureen.

The above is the orthodox English way of roasting woodcock. If it is not liked, fill the birds with a rich forcemeat or stuffing, sew them up, and roast from twenty minutes to half an hour, basting with butter and water. When half done, put slices of buttered toast beneath, and serve the birds upon these.

WOOL.—Though less costly than silk, wool has far more value as a textile material. Generally the fabrics made of it are thick and coarse; but even in respect of textile beauty really good wool stands very high, while as regards the power of imperfect heat conduction or warmth, wool is far superior to any other material used as clothing. (*See* CLOTHING.)

WORMS.—The following are some of the chief symptoms of the presence of worms in children: irregular appetite, which is sometimes voracious and at others languid; there is often a craving for food after a full meal; the bowels are sometimes costive, but more generally loose; the motions are slimy and pale; often there is a bitter colic, and sometimes feverishness; the breath becomes fetid; and there is often a livid circle around and under the eyes. After a time the child becomes emaciated, while the abdomen is enlarged; the upper lip often becomes thickened, and sometimes the nose also; the child often picks its nose, and during the night grinds its teeth. It is seldom that all these symptoms occur at the same time, and no one of them is peculiar to and distinctive of worms. The most unequivocal are the irregular appetite, the craving for food after a full meal, the bowels at one time costive at another relaxed, and the slimy character of the motions. When these symptoms are present, worms may be suspected, but the only proof of their existence is seeing them in the stools.

Treatment—The most necessary thing to do is to regulate the child's digestion; but in the meantime, to obtain immediate relief, dissolve a lump of bitter aloes of the size of a large hazel-nut in half a pint of hot milk, and give it as an injection; occasionally, allow the child to inhale spirits of turpentine, by holding a cloth having a very little upon it to the nose, for an instant only. Or, make a tea as follows: Get half an ounce of *pinkroot* and a quarter of an ounce each of senna and of fennel; put a pint of boiling water on them, and give a tablespoonful three times a day. Nothing more in the way of medicine should be given except under medical advice, the common worm-cakes, vermifuge, and similar remedies, nearly all contain calomel.

Thread-worms.—The above symptoms and treatment apply to the common round worms which infest the bowels. The *thread-worm* is a slender worm, from a quarter to half an inch long, which makes its abode in the lowest portion of the intestinal canal, where it causes an almost intolerable itching. At night, the worms frequently wander outside, and then the itching sensation becomes more acute. These worms are easily removed for a time by injections of warm water, and their reproduction may generally be checked by injections of an infusion of the seeds of the *santonica*, or a solution of salt and water; a solution of aloes in water is also a good and popular remedy. The best way to remove them permanently is to strengthen the system by tonics and a generous diet, with plenty of exercise. (*See* TAPE-WORM.)

WORSTED.—Yarn spun from combed wool, which, in the spinning, is twisted harder than ordinary; it is used for carpets, hosiery, gloves, etc. The term is often used erroneously as if it were synonymous with *woollen*.

WOUNDS. (*See* BRUISES and CUTS.)

WRINGERS.—The success of Washing Machines for clothes is as yet doubtful, none having as yet been found to furnish a perfectly satisfactory substitute for washing by hand; but *clothes-wringers* perform their work far more perfectly than it can be done even by the strongest laundress. There are several different kinds of Wringers, varying from each other sufficiently to secure separate patents; but all of them consist essentially of two India-rubber rollers, kept at a tight pressure by means of screws; on turning a handle, the clothes, when washed, are drawn between the rollers, and pressed dry without injury to the fabric. In the best wringers, so equal is the pressure that the same machine will press dry a thick woollen carpet lifted directly from a tub of water, or a thin sheet of writing-paper that has been immersed for hours. Most of the wringers are so made that they can be fastened to any kind of tub, and their use may be confidently recommended.

WRITING-INK. (*See* INK.)

Y

YAM.—The common Yam is an excellent vegetable, closely resembling the sweet potato. It is extensively grown in the Southern States, whence it is sent to the Northern markets, where in favorable seasons it is both plentiful and cheap. The yam is much larger than the sweet potato, is more irregularly formed, and is quite darkly colored. By some it is preferred to the potato, and any one who likes the potato will like it. Yams weigh usually from one to three pounds each, but occasionally they weigh as much as twenty pounds. They are in season from September to January. Cook and serve them as directed for sweet potatoes. (*See* POTATO.)

YEAST.—Yeast consists of a number of fungi, called the yeast-plant, floating in the liquor in which they are developed. These fungi are in the shape of minute oval or circular bodies, or sporules, which, under circumstances adapted to their development, grow and multiply to an incredible extent in a very short time. They are easily destroyed by heat, cold, or mechanical injury, or by chemical agents. In dried yeast, great care is required in handling it for the purpose of making it into parcels, or it will be rendered useless by the destruction of its vital principle.

Brewer's or Distillery Yeast.—This is the frothy substance that rises to the surface during the fermenting of malt liquors. It is superior to any other yeast, and may generally be procured from the brewer. One eighth as much of brewer's yeast as of ordinary yeast is required in making bread, etc.

Compressed Yeast.—Sold in small squares, wrapped in tinfoil, and has but recently come into use. It acts very quickly and is much liked. It must be bought fresh every week.

Hard Yeast, or Yeast Cakes.—I. Take some of the best yeast you can make, and thicken it with Indian meal till it becomes a very stiff batter; add a little rye, if any is at hand, to make it adhere better. Make the mixture into cakes an inch thick, and three inches by two in size, and dry them in the wind but not in the sun. Keep them tied in a bag in a dry cool place, where they will not freeze. One of these cakes is enough for four quarts of flour; when it is to be used, soak it in milk or water for several hours, and then use it like other yeast.

II.—Stir into a pint of good lively yeast a tablespoonful of salt and enough wheat flour to make a thick batter; when it has risen, stir in Indian meal till of the right consistency to roll; when risen again, roll them out thin, cut them into cakes with a tumbler, and dry them *in the shade* in clear windy weather. When perfectly dry, tie them up in a bag, and keep them in a cool dry place. Use one of these cakes to four quarts of flour, dissolving it in a little lukewarm water or milk. These cakes will keep good for five or six months.

Hop Yeast.—*Take:*—Hops, ¼ oz. (one handful); pared potatoes, 4 lbs; salt, ½ pt; sugar, ½ pt; ginger, 1 tablespoonful; water, 4 qts; yeast (home-brewed), ½ pt.

Boil the potatoes in three quarts of water, and pass them (with the water) through the colander; boil the hops ten minutes in one quart of water; strain the water on the potatoes; add the sugar, salt and ginger. The whole should measure five quarts: if it lacks, add tepid water. When lukewarm, add the yeast, mix well and leave in a warm place till light; this will be indicated by bubbles on the surface; it does not increase in bulk like thicker yeasts. Keep it in a covered crock, and in using stir it up from the bottom. A gill is sufficient for one quart of milk or water, and the bread will require little, if any, additional salt. In a dry, cool place this yeast will keep for months. This receipt, has been in use for a long time, both in the country and city and is very highly prized.

Patent Yeast.—Boil two ounces of the best hops in four quarts of water for half an hour; strain and cool till lukewarm, then add a small handful of salt, and half a pound of sugar; beat up a pound of flour with some of the liquor, and mix all well together. Let it stand 48 hours, and then add three pounds of potatoes, boiled and mashed; let it stand again 24 hours, stirring it very often; then strain and bottle, and it is fit for use. It will keep in a cool place two months.

Potato Yeast.—Pare and boil six potatoes, and mash them through a cullender; mix with them six tablespoonfuls of flour; pour on this a quart of boiling water (the water the potatoes were boiled in is best), and add half a teacupful of sugar, and a tablespoonful of salt; when cool mix in a teacupful of home-made yeast or half as much brewer's yeast.

YELLOW FEVER.—This is an infectious, continued fever beginning with languor, chilliness, headache and pain in the back; the countenance is flushed and the eye moist and suffused; the skin gradually acquires a lemon or greenish-yellow color; there is generally wandering of the mind, and often delirium; the patient is restless and watchful, or he may pass into a state of drowsiness and then coma; there is an uneasy feeling at the pit of the stomach, and

vomiting, at first of a clear, glairy fluid, which afterwards becomes of a coffee-ground appearance; there may also be irrepressible hiccough, and shrieking or melancholy wailing. Sometimes the disease progresses with fearful rapidity, passing through all the stages, and putting an end to the patient's life within twenty-four hours. The vomiting of the dark-colored fluid is indication of a fatal termination. The *cause* of yellow fever is obscure. It seems to be endemic in certain localities, and is always highly contagious. It appears to affect those who live in the low country more than those on the hills; it does not extend, as a rule, to parts more than 2500 feet above the sea. A certain amount of heat is also essential to its development; few cases are observed where the temperature is less than 72° Fahr., and the first frost puts an end to its spread. Second attacks of yellow fever are very rare.

Treatment.—The patient should have a hot bath as soon as the symptoms appear, and then, going to bed, he should have warms drinks so as to encourage sweating; this may be followed by a purgative so as to keep the bowels well open. Mercury need not be given; nor is quinine of any use. The sickness is very distressing, but may be relieved by lime-water, or a few drops of chlorodyne or chloroform; creasote and hydrocyanic acid, though sometimes recommended, do not seem to be of any use for this purpose. Stimulants must be given according to the needs of each case. The great objects in treatment are to sustain the vital powers, to moderate the febrile excitement, and to check any distressing symptoms that may arise. Competent medical advice should be obtained at the earliest possible moment.

YELLOW GUM.—This is the jaundice of new-born infants. It comes on two or three days after birth, and the child's skin is of a yellow color, the urine very dark and staining the cloths a deep yellow, while the motions are light. It is a simple disorder which will soon pass away. It is due to the liver not acting properly at first. The child should be put to the breast, and the mother's milk is generally sufficiently aperient at first to open the bowels; if not, a little grey powder may be given at bedtime. It may be some days before the yellow tinge is quite gone from the skin.

Z

ZINC.—This metal has lately been introduced into domestic economy for vessels of various kinds, and for other purposes. The salts of zinc are not so poisonous as those of lead; but they are so to a great degree, and therefore this metal should not be used in the construction of vessels in which food is cooked or kept. Zinc is very little liable to rust on exposure to air, and therefore is a useful material for many utensils formerly made of iron or copper. Coal scuttles are now made of zinc alone, or of sheet iron coated with zinc, which are more durable than those of iron, and cheaper than those of copper. Zinc is also employed instead of lead for baths, as being cheaper, and for pails, and rain-water and other pipes.

Several of the salts of zinc are used in medicine. The *oxide of zinc* is made by heating the carbonate; it is a white powder, without taste or smell, and turns yellow by heating. Its only preparation is an ointment, which is very useful as an application to raw and weeping surfaces. If given internally in large doses it causes vomiting, but it is never used with that intention. Given as a nervine tonic and stimulant; used in chorea, epilepsy, hysteria, and neuralgia. Dose 3 to 5 grains, best in pill form, 3 times a day. *Chloride of zinc* is made by dissolving zinc in hydrochloric acid. Chloride of zinc paste has powerful caustic properties, and is used to destroy cancerous masses and malignant ulcers, so as to obtain a healthy fresh surface. In weaker solutions it is useful as an astringent. *Sulphate of zinc* is the most important salt of the metal; it is got by dissolving zinc in sulphuric acid. The salt occurs in crystals, very similar to those of Epsom salts, but gives off water instead of absorbing it from the atmosphere. Given internally, sulphate of zinc causes vomiting speedily and surely; it is thus one of the best emetics in suitable cases, but must not be administered where there is already irritation. It is given in smaller doses like the oxide, as a tonic in nervous complaints. Applied externally, in various forms of discharge, sulphate of zinc is a most valuable astringent. The dose as an emetic is from fifteen to twenty grains; as a tonic from three to five, three times a day; as a lotion three grains may be dissolved in an ounce of water.

ZINC-WHITE.—This is similar to white-lead in appearance, but has less body or covering qualities. It is frequently used *over* white-lead paint, when an extra finish is desired. It is of a beautiful white color, and when mixed with white varnish, it forms the "china gloss" of commerce.

ZINNIA.—The Zinnias are hardy annuals, and among the most desirable of this popular family of plants. The single Zinnia was an old favorite in the garden, but is now completely eclipsed by the fine double varieties. The latter grow to a large size, and produce a profusion of red, yellow, and purple flowers, as

large as a rose, all summer. They are among the most ornamental plants in the garden. The seeds should be started in a frame in April and transplanted to the garden in May, or the young plants may be procured of the florist already started. They will thrive in any good garden soil, but this should be well pulverized and raked smooth. Water must be given frequently in the hot days of summer. In the autumn, when the frost has killed down the plants, pull up the old stalks, and in the spring sow new seed.

APPENDIX

ADDITIONAL RECIPES

WRITTEN IN BY THE OWNER.

☞ *Whenever a new recipe is written in, a reference to it should be entered on the margin opposite the proper title in the book, and in the Index.*

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